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INDIAN JOURNAL OF ECONOMICS

Vol. III—Part 1

ESSENTIALS OF SOCIOLOGY IN RELATION TO ECONOMICS

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DIRECTOR OF THE CIVIC EXHIBITION

As a student of sociology, and one who has largely come to this through a lifelong interest in economics, I interpret the friendly opening of these pages as a recognition that other students of economics are thus also increasingly extending their initial and fundamental interest in "the production, distribution and consumption of wealth"; and so are inquiring—in fact as sociologists—into the wider relations, and bearings, of these great and essential processes within the general stream of human life.

And at this peculiarly vivid and critical time, with all the world in flux—even empires in the melting pot, new and old nations crystallizing afresh, and all their institutions under criticism and review—our scientific concepts are necessarily also calling for reconsideration, and this as full and clear as may be.

In these times so urgent, so swiftly moving towards decisive action and determination of the

opening future accordingly, we students are all the more compelled to set to that stock-taking of our ideas and ideals which we now see we have too long delayed. The old Roman saying, *inter arma cedant togae*—that in war-time, when weapons are out, the gownsmen stand back and keep silent—can now no longer be our excuse; and for such ideas as we can muster, their mobilisation for peace-time is now necessary. For if ever they are to find a hearing, it must be soon: but for this purpose we must arrive at increasing understanding among ourselves. For that this is a period of social transition, if ever there was one, no economist or sociologist will deny. It is for us to bestir ourselves: events do not wait for us.

I

From the first great attempt at outlining the conceptions of sociology—that of Comte as its modern founder, now nearly three generations ago, and thereafter onwards, sociological criticisms have been frequently made of the postulates and methods of political economy, and sometimes constructive proposals as well. Converse criticisms sometimes also: yet on the whole, too little serious discussion has yet taken place, between those primarily occupied with the construction of a general social science, and those specially concentrated on economics. Hence the writer heartily responds to the invitation of the editor to set down such sociological conceptions as, he thinks, may have most direct value and bearing for the student of economics.

Whether our ambition be thus the more general, or the more defined, we agree that we alike need to understand the society in which we live and work, and this as clearly as may be. We alike see the necessity for this; of understanding all we can of the

phases and forms of society, of which the present must be the complex resultant. Furthermore, we agree,—as indeed all men of science do, and must—that we would fain discern all we can of the opening future; and thus reach such practical indications as we may, towards better social guidance.

Only mathematical truth can claim to be immutable, if always even this. Otherwise, as modern men, we are striving to decipher the evolutionary changes which we are compelled increasingly to discern in action, in the physical, the organic and the social world alike. Yet not alike, but with increasing diversity and rapidity, as we ascend from the physical to the social world.

Our scientific endeavors are thus no longer mere surveys or interpretations of the present. The past generations of evolutionists have primarily been occupied with the investigation of origins in the past, and of their developments accordingly; and their results, in all fields of enquiry, as from astronomy to language, or from the new alchemy of radium up to social changes in peace and war, have thus formed our essential education, our preparation for such contributions to this and that science as we, in turn, strive to offer.

But of late years increasingly, our evolutionary attitude is becoming less content with retrospective enquiries and interpretations: it increasingly turns forward, and seeks to make out the various streams and processes of evolution as they move around us. We thus increasingly view the present as in flux: between the moving inertia, the accumulated heredity, the social inheritance, and the nemesis, of the mingled past; and the continual, yet changing, interaction of all this past, through our passing present, into the opening future. What processes of this evolution can we discern within our present section

of the moving stream?—what general directions does it show?—what specific tendencies may we discern?—what alternatives, what possibilities may we foresee?

That such large enquiries are reasonable, even increasingly necessary, is surely becoming manifest, and at this time more so than ever. Every thinking man—let alone the economist in every department of his work, or the sociologist moving from field to field—is at present seeing that the great war now concluding, the renewed peace now beginning, promise no mere return to “business as usual”, nor perhaps in any way to what we all now see was a too easy-going world before the war. Are we not agreed that this long and terrific war can be no mere parenthetical interruption of our economy of comfort, and our corresponding economy of thought? Is not the War increasingly discerned as but Act I of some new drama of social evolution—comparable at least to that initiated by the French revolution and industrial revolution; comparable again to the transformations and strifes by which the middle ages gave way to the renaissance; or, perhaps most of all, to that evolution of the middle ages which followed the close of the dark ages, of barbarian invasions, from which we have just emerged anew. There is of course in this no suggestion that the opening course of social evolution may, should, or can simply follow on the lines of any of these; though all may afford suggestions and warnings. The point is that our opening present may be no less significant than have been any of these. Indeed with the present vaster scale and intensity of human life, and its growing solidarity throughout the world, it may well be anticipated that this opening career may be yet more significant; containing, as it surely does, yet higher possibilities for good than ever before, and also deeper for ill.

Beyond that world-strife of empires and nations grouped in arms, which has been Act I of this transition drama, we have already for sometime been seeing the openings of Act II, as so notably in Russia and also beyond; and with definite examples, and spreading threats, of social disorder, of civil war and even of catastrophic revolutions, and with the whole clouded in confusion, through which no one seems yet to have discerned much light; still less emitted it. As peaceful men, we desire to avoid such catastrophes and confusions. Yet as thinking men also, we see that this is not to be done merely by sitting on safety-valves, and too often going to sleep there, as did some of those whom we have seen overthrown. But this avoidance—now changing our metaphor from the mechanical to the vital—can only be by the encouragement of social and individual growth and progress; and these not towards thorns or poisoned stings, but towards flower and fruit. Towards such aims our endeavors, both interpretative and practical, economic and general, have surely now increasingly to be turned. How far then can we as sociologists and economists, aid towards this social reconstruction, which this revolutionary Act II—even more than Act I—shows to be necessary?—and thus begin to prepare Act III towards happier issues? How far then can the study of sociology—and with this of biology, since also helpfully constructive and synthetic, because evolutionary—be made of service to the economist? And conversely?

The surveys of biology range beyond the practical needs of medicine: yet it is historically the impulse of medicine, which has earliest and oftenest impelled the advance of this wider science, and it still does so; often even through the working physician himself. So also the advance of sociology—of biology

too—has often been stimulated and aided by economics, and this may increasingly contribute to both. For the general social inquirer and the economist are surely agreed that they desire to share in making the fullest and closest possible social survey; and further, they desire that this survey and its corresponding interpretations become of social service.

II

Enough, then, for the present, of this current transition—of which any and all general views await social and economic analysis. We must take note of the organic needs of men; and so of the way these are satisfied. Primarily therefore from the physical environment, on which men depend for work, and for very existence; their societies accordingly. Furthermore, all this needs exact notation—grouping not only logical, but graphic in presentment, as far as may be.

How then may we best approach our great problem—economist and sociologist together? Can we, as the former has especially done, deal with our problems logically, and next bring in such mathematics as we may, and from numeration (statistics) onwards? So far well; but these methods used alone, have too often landed the economist on a desert of illusory simplicity, or before a mirage. For this is not simply a logico-mathematical universe; it is also a physical one, an organic one, and for us especially a concrete social one; and so needing realistic treatment also, and throughout. This realism was the strength in the economic initiative of the physiocrats, but has since been too long ignored, even forgotten. In principle, however, it was revived by Stanley Jevons, in his arousing enquiry nearly two generations ago into the actual physical amount, and intrinsic value, of the coal-fields of Britain, on which her staple

industries depend. But since these are so fundamental, he thus returned to the physical plane of reality, deeply underlying the previous studies of classical economists,—of capital and labor, supply and demand, manufactures and markets, money, etc.,—legitimate of course each in its own way. Jevons also followed up this recovery of the physics of economics, by his correlation of corn-prices and famines with the cosmic cycle itself, and in particular with the astronomic cycle of waxing and waning sun-spots. Yet his teaching—since involving the necessity of scientific re-education, so uncongenial to adult minds—fell mostly on deaf ears: and even the few economists who mention these interesting inquiries in their writings more or less fail to recognise that here were no mere interesting side-speculations, but the re-opening of a whole new level of physical science, underlying every economic conception, and this as definitely as it does the working of a steam-engine; and as physical and chemical processes underlie physiological ones.¹

Is our scientific outfit for social and economic inquiries now sufficient? Certainly not.

The economist has always known that wants and desires, pleasure and pain, are psychological in their nature: but, while he would blush to make a mistake in his logic or his mathematics, his psychology has too long remained at the simple level, even the crudity, of the classic utilitarian's; and it is only of late that a few writers have been keeping pace with the science; and even these perhaps too incompletely. This recovery, however, is in progress: but the biologist has still reason to complain that the economist lags be-

¹ For a more general outline of this physical treatment see the writer's *Analysis of the Principles of Economics* (Proc. Roy. Soc. Edin., 1881); and for a lucid outline-inventory, A. H. Gibson's *Sources of Energy* (Cambridge Sci. Series, 1914).

hind his science: and this although the correlation of economics with biology is perhaps the most obvious and close of all connections between the sciences. For what are those needs of man which the economist's efforts study, and consider how to satisfy? Those of food, shelter and clothing, of agriculture, industry and manufactures accordingly, and with transport, exchange, etc., as necessary developments—all biological or bio-physical. And so, if possible even more obviously, for the great population question; so too, as conspicuously, for competition, which is but man's intensification of the pan-organic struggle for existence. Yet so paralysing has been our increasingly narrow division of labor in higher education, that it has been left to a single American economist—Prof. Simon Patten¹ of Philadelphia, to put Darwin clearly in his place in the history of economics. And since too many economic writers, and their contemporary students, seem still to regard Darwin—if not simply as a more or less interesting potterer among flowers and insects, with speculations about monkeys and men, or as at most a disciple of Malthus, drawing corollaries in his own natural history field—we may here cite Patten's estimate: (ch. xxiii and p. 343) "Just as Adam Smith was the last of the moralists, and the first of the economists, so Darwin was the last of the economists, and the first of a new school of biologists. He is deductive as an economist and inductive as a biologist. Like Smith he completes one period of thought, and opens another". Again (p. 348), "the change which the biological habits of thought have introduced can be made plain by contrasting these habits of thought with those of the (previous) economists." Here then we have at any rate one economist clearly recognising the necessity

¹ *The Development of English Thought, as a Study in Economics and of History.* Macmillan, 1904.

of bringing the subject up-to-date in respect of biology. Yet though a few other economists, *e.g.*, Veblen,¹ are incidentally doing this, no general treatment of biological principles in their bearing on economics seems yet to have replaced the writer's brief *Analysis* above referred to. Yet is not this inquiry now necessary, even urgent?—and this for every school of economics alike, capitalistic or socialistic? Hence—unless this whole line of argumentation be overthrown, and the use of sciences be abandoned, with return to deductive logic only—the defects of economics, in so far as it neglects any of the preliminary sciences, are manifest; and of course similarly its renewing possibilities of advance, as it may increasingly utilise and combine them.

Here is at once the historic advantage and the priority of sociology—that its founder, Comte, began nearly a century ago with this full intellectual outfit, so far as his times allowed. Not only was he logical in treatment and mathematical in spirit—as was natural to a mathematician by profession—and also physical, as natural to his life-long connection with the Ecole Polytechnique, but he was also intimately acquainted with biology, and even with the ideas of medicine; of both of which Paris was, in Comte's day, incomparably the metropolis, as from Lamarck and Bichât to Geoffroy St. Hilaire and Cuvier, etc. He learned much from the progressive physicians, especially those then actively discussing the problems of psychology, in health and disease alike.

He thus clearly realised, from the very outset of his studies, and throughout his whole work, the conception of sociology as dependent upon the utilisation of each and all these preliminary sciences: and his serial *Classification of the Sciences* is thus funda-

¹ See his *Theory of the Leisure Class*; *Theory of Industrial Enterprise*, etc.

mental to his whole sociological thought. As his experience advanced, and his culture deepened, he came to realise the value of the fine arts, and the bearings of æsthetics: as also the prime significance of sociology in application towards social and international ethics; though he did not live to publish this crowning volume—so much needed.

Comte's reproach of economics, for its "notorious discord and sterility", he thus explained; even if this be now less justified. And not only is it Comte's merit to have established this ascending order of the sciences, each underlying its successor, like the storeys of a building; but he further realised, with unprecedented clearness, that the preliminary sciences are not so purely abstract or externally phenomenal as their students have mostly supposed, and thus socially detached; but are each and all of them development of the social process itself. That is to say, logic and mathematics, physics and chemistry, biology and psychology, are none of them independent of the social life from which their cultivators may seem isolated, even to themselves: they are, on the contrary, direct products of the social conditions and changes of their times, and so have advanced or stagnated with these. Comte traced too, with the same French lucidity, still too rare in other countries, the rise and progress of all these sciences in interaction with the associated arts: and so he insisted on our handling and grasping all these together, towards an adequate sociology and economics truly abstract, because thus substantially and connectedly concrete. This human and social bearing of any scientist he expressed also in his widely comprehensive *Calendar of Great Men*; which with all its limitations, is still the fullest existing outline of the progress of humanity up to the middle of the last century, so that its ex-

pansion into a volume of biographies, with interpretative commentaries, has given us the most illuminating encyclopedia of reference in the language,¹ for the student of the history of science and invention, since each advance is shown in its social and economic connection.

With all this clearness and comprehensiveness, and more, why has sociology been so slow of spreading, in the English- and German-speaking worlds especially? And this though all our utilitarians were what Comte's disciples call—and fairly enough—incomplete positivists, as from Bentham onwards: while John Stuart Mill and others, *e.g.*, Bain, were deeply influenced by his works, and while even Herbert Spencer, despite his criticisms and protests, was essentially but his continuator at best? Primarily because of the extreme rarity, in fact the practical absence even to this day, of the necessary comprehensive educational outfit; which neither British universities, with their culture still mainly pre-Germanic, nor yet German universities, have as yet adequately supplied. Despite their encyclopedic details, these are chaotic, in absence of any synthesis other than metaphysical. Their last attempt at synthesis is their conception, at once metaphysical and even super-theological, of the State as the be-all and end-all of thought and activity; in short of *the State as Power*. And this, in open revolt against "Humanity"—Comte's culminating conception—gives clearly the main explanation—on intellectual grounds, of course—of the War. With this, of course, a ruthless acceptance of Darwinism, and in its sternest form; of which Nietzsche, Treitschke, Bernhardi and others whom we have blamed were but exponents, who, as it were, have but been firing Darwinism back at us.

¹ Frederic Harrison's *New Calendar of Great Men* (Macmillan).

The main conceptions of the sciences are not only ordering their sub-specialisms but are themselves the unifying specialisms of the cosmodrama. Yet these are not only products of human development; but each and all necessary organs of its activity and intelligence, like the very limbs, the very eyes, and no one of which thinking man can dispense with, without injury even greater than physical mutilation or blinding. For he is mathematician, physicist, biologist, psychologist, sociologist, moralist—*i.e.*, with all these elements of the thought and activity of men, and not merely in serial order, but in organic unity also like the fingers of the hand. Whereas our existing curricula—still so often merely mathematical, even distinct from physical, or too often these in insufficient clearness for any of the above remaining three—are thus comparable to old rituals of mutilation, rather than to education proper. Indeed from this viewpoint are not some of the German dis-specialisms we have of late been adopting as the last word in science, like endeavors to reduce the hand to this or that finger-joint only; often no doubt with remarkable hypertrophy accordingly, yet too often also even withering of this instead. It is marvellous, as the war has lately been showing, how much men can do in spite of mutilation; yet are we not making haste to supplement the missing organs as fully as we can? So for dealing with the social and economic world in its complexity we need the complete and un mutilated grasp.

This, then, is the main explanation of the slow and imperfect progress of economics, and the yet slower progress of sociology, which has from the outset made this large demand in full. Furthermore it is at the present time, of a stock-taking of higher and general education, with its re-organisation in every country, that such general views and claims should again be put forward.

It is difficult for every man past his formative years, to supplement his deficient scientific education, humanistic or naturalistic; and with most of us that preparation was in itself too static, formalistic and analytic; so that our openness to fresh outlooks and requirements is limited and difficult. Yet the process of social and moral conversion may impel us to effective re-education. Such conversions are rare; indeed peculiarly so during the past half-century and more of predominant reaction, of which we now see the long ascendancy of Prussian conquest and militarism to have been but the culminating symptom and expression, as from Bismarck, (indeed even from Frederick) onwards to June, 1918. For economics even in its harshest forms, now happily vanished, has in the main been concerned with general and peaceful needs, and little with militarism; and sociology with human needs, up to their very highest. No wonder then, that the progress of both studies has been retarded, and of the latter specially; but now with the advent of peace the sociologist is in quest of new and more ideal paths for peaceful evolution: the economist also has larger and more social hopes before him than ever. True, the dis-specialist will still survive awhile. Feeling safe inside the fortress of his minor specialism, whichever that be, and with its gate closed, its moat full and its drawbridge lifted, he will shudderingly tell his young men how these dreaming sociologists, these hard practical economists, want to bring their fortress, himself and them, into their general lines, throughout the region and around the city; in fact interfere with his autonomy. Still, some of his young men will join us, in spite of him; and make his fortress of full use for the first time.

This argument is not a plea for present positivism. It has been the limitation of the positivists—that of

the disciples of every great initiator—more to treasure and swear by the words of the master, than to apply these, or continue his active example. Botanists thus for wellnigh a whole century mistook the scaffolding—of the “artificial system”—which Linnæus had set up towards erecting the natural system—for this edifice itself; and so resisted the very progress which their master foresaw and desired. But of the opposite kind is the importance and significance of Herbert Spencer in sociology. First he was very fortunate in his home education and professional training, both quite outside the universities, with their studies, from humanistic to mathematical, dis-specialised into unsocial curricula. He thus developed, from childhood onwards, in an ever-growing familiarity with each of the main fields of knowledge; and although, again like Comte, of essentially mathematical and physical tastes, he not merely mastered the biological, psychological and sociological sciences of his day, but advanced them. He had the great advantage over Comte of belonging to a later generation of science. He thus realised—indeed most fully of all men—the super-physical significance and range of the doctrine of energy. He had also independently thought out for himself a clear and general vision of evolution, ranging from planetary and stellar evolution, and through geology to biology. His *Principles of Biology* is still far more important than most naturalists know, fascinated as they have been by the more intensive naturalistic wealth of Darwin. For while in physiology Darwin, despite his initiative, remained something of a tyro, Spencer reached much of mastery: exceeding our physiological professoriate even to-day, who, with all their skill and detail, have never yet appreciated, much less superseded, his grasp, for instance, of the antithesis

of nutrition and reproduction, with its far-reaching consequences throughout the whole range of organic evolution,¹ and thence even up to ethics; in which these broadly underlie egoistic and altruistic tendencies, and so have bearings in economics also.

III

Enough now of Prologue: what of Introduction? That is, what general view of sociology can we offer, or at least suggest? What methods for further use? In the first planning of this paper the general outlines were left to the last; as naturally resulting from its arguments. But as its writing has progressed, it has become apparent that some introductory outlines of the main view-points and thesis need to be also offered at the outset. In this way the reader will see from the beginning what is aimed at: and may, it is hoped, be thus less impatient with the writer's mode of treatment, which otherwise might appear perplexing and discursive: since at one time critical and at another constructive; now general, abstract and classificatory, yet again concrete; and ranging in presentment from graphic summaries to concrete illustrations, examples and allusions, even anecdotes, though it is hoped relevant ones.

The sociological methods which the writer has specially found of service and application have mainly been three. First, and most obviously relevant to the social situation as a whole, is the historic method; yet this not merely in terms of the wealth of annals, to the completion, correction and at most comparison of which our working historians would often limit us. For sociological purposes, we must attempt to utilise, and to develop, the fuller and more interpretative

¹ For further applications of this principle, see Geddes and Thomson's *Evolution of Sex*, Scott, 1889, and *Evolution and Sex* (Home University Series.)

grasp which was initiated—or rather revived—by Comte, whose philosophy of history recognises the dual nature of every historic phase of society, its character at once “temporal” and “spiritual,” these being again analysed into their concrete types the former as “people and chiefs”, and the latter as “intellectuals and expressionals” accordingly. But this approach is primarily for the historian and the student of politics: and though this is also legitimate, and even pressing for the economist, it is also the most deeply controversial, from the very outset. Hence it is better to start with subjects of more common agreement. At the outset, then, let us content ourselves with simpler and more familiar approaches, with earlier origins, and with matters of sciences less liable to dispute, and these more easily settled. We may thus come to actual questions later, and with more of common understanding.

IV

It is thus here assumed, as generally recognised in theory—however as yet inadequately developed in practice—that the main “sciences”, into which we analyse our studies of the universe of nature and of human affairs, are of four orders—mathematical, physical, biological and social. The abstractness and generality of mathematics has from the first been in contrast with the phenomenal concreteness of the three other sciences, of physical nature, life and man.

What are the subject matters of these sciences? And—for realism’s sake, not archaeological interest, let us ask—How have they arisen? How developed in the long past? With the first human child who counted his fingers, and then his toes, mathematics had begun; and counting would naturally first progress with stock-taking of property and “goods”—of stones, implements and weapons, of cattle etc.

i.e., as statistical and economic from the beginning. Economics has similarly had great part in the making of every science, and this for unnumbered ages before it came to consciousness.

Of great antiquity, yet continuity up to the present are the observations of the astronomer; so from ancient stone circles to Man Singh's observatories and modern ones, the nightly watch has gone on. Yet the branch, the stone, the spark, of primitive man have led on, though more irregularly, to the metallurgy and engineering, the physics and chemistry of to-day. Stars and planets, sun, moon and earth are of concrete physical interest; with his increasing grasp of mathematics, the astronomer has long been learning to measure, to calculate even to predict: and thus his science has progressed, in range and depth of observation, and in abstractness of rational comprehension, by turns and together. Yet also in economic significance, for with the discovery of the year came regulation of agriculture, *i.e.*, economic application and advance.

So for the ancient studies we now call geological, petrographic, mineralogical. The search of stones for implements, is from civilization's primeval days, and must soon have been accompanied by that for jewels, whose modern fascination is thus a growth from prehistoric times. The once easy gathering of gold in river-beds, its simple fashioning, its hypnotic splendor, are similarly beginnings of great factors of our contemporary civilization. After this too came the mastery of copper: and by and by the amazing and unexplained invention of bronze. The discovery of iron—at first presumably meteoric, as with modern Eskimos robbed of their meteor-mine by Peary—was complemented by its mining and smelting—first by African peoples, we are told; and from these the

steps to the modern age of steel and coal become clear. Yet in essence the modern prospector, be he out for oil, diamonds or radium, is plainly continuous with primitive man. So though the evolution of machinery be for us in the main a matter of the recent "Industrial Revolution" of the West, it nonetheless began in the hands of awakening man with the branch of a tree as lever, as hammer, and by and by as shaft of axe-wedge: and the other "mechanical power"—the roller as axle, wheel and pulley, the inclined plane, the wedge again, if not even the screw—are similarly legacies from the earliest mastery of the tree—first fallen, then by and by felled—for fuel and for boat, for log-defence, log-hut, and so on. Ever the mingled economic applications, the social significance.

Similarly with the antiquity of what we now call the sociological sciences. The seizing, hunting, trapping, of beasts and birds, the catching of reptiles and of fishes, the gathering of eggs, of crustaceans and molluscs, of insects and their grubs, with stealing of honey, and so on, are no mean training in zoology; while the other side of the primeval search for food—the hungry testing of fruits and seeds, and of roots and leaves in scarcer seasons—could not but reveal medicinal properties as well as nutritive ones; and thus must have founded our medical and our economic botany together. So with skins and bark for clothing, and later from fibre nets to textile garments; and above all with the domesticated animals (which have so largely domesticated man in their turn) and the development from primitive gardening and fruit growing to modern agriculture, the advance of zoology and botany has been going on. It is thus plain that the biological sciences have been strengthening in the general thought-solution since the earliest

times. Thus they survive more or less among the simplest folk: so that to this day the Lepchas of Sikkim know incomparably more of the living things around them than do the "educated" Indian and European visitors who look down upon them at Darjeeling; and so they furnish the best of "collectors" (in fact guides) to the trained naturalist. Similarly with the Santals or the Australians: while the vast vocabulary of the Fuegians, which so surprised Darwin on his "Naturalist's Voyage", is thus largely explained. So, though the abstract concept of "Social Science"—or "Sociology" is recent, and still too rare among us, the concrete stuff of social science must be as old as social times. Tribal and family knowledge and tradition are universal: so that the more we know of that too long despised surviving paleolithic folk, the Australian aborigines, the more we find to wonder at, and even to respect, in their social organization, and its functioning; and in their grasp and comprehension of this also; in their own way of course.

The sciences then, despite their modern advances, are all in essence, old stories and useful ones; and they have grown and still advance, not only through active observation, and elder meditation, but also in and through relation to the practical efforts of man's life. The sharp distinction of "Science" and "Practice",—though of course a convenient logical expression—has also become too much diffused in school and college as a logical superstition: for it is manifest that what we call "an experiment" is but an individual's resort to practice: and how often, and how fully this practice when successful, may then become diffused, and even adopted as a general one, both the ancient and the modern advances of all "the applied sciences" alike plainly show.

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Moreover, there is ever-increasing ground for the belief that the purest theory owes more to the theorist's own life and circumstances than he generally realizes—witness Darwin and Wallace's theory of Natural Selection, in both cases derived from Malthus, as leading economic and social thinker of the preceding day: and though this origin—and method—has been too much overlooked by subsequent naturalists, their own mind-coloration by their social life and environment is perhaps none the less clear. Is all this common knowledge? At any rate its bearings are less commonly realized: and thus they have fallen too much out of current civilization and education: it is therefore worthwhile to consider some of these.

These main sciences which we nowadays call mathematical, physical and biological, are but so many elements and abstracts of our general experience of Nature: they are names for prominent aspects of our geography (cosmography); or more simply, as we now say, of nature-study. But if so, the wondering and hungry child, the truant, the wanderer and traveller, may be, (indeed commonly is) more truly following the main human road of discovery, than are the docile school boy, or the model student of our modern colleges, with all their successes and honors in each department and class. Hence Darwin, a representative truant, yet foremost of naturalists, is the culminating type of both of these in one: and he is in this dual way far more representative of the main history of scientific discovery than is commonly realized—at any rate in our recent academic tameness. But as the naturalist as teacher recovers this elemental insight, he is organizing the truants of yesterday as the "Seton Indians" of America, or the Boy Scouts of England. Witness too the convalescence of teachers, at seaside and in forest, in laboratory or in camp,

while the geographer is now increasingly co-ordinating "nature-studies" and "humanities" into his "Regional and City Surveys", and these of course pursued in the open.

Returning then from education to civilization in general we see that the progress of our natural knowledge has been mainly, though not exclusively, impelled by those clamant needs and wants of life we now call "economic"—of course in that wide sense which does not limit economics to its more accessory processes of barter and exchange, important though these have become in recent phases of civilization. The current separation of "pure sciences" from "applied sciences" and of these into different faculties and curricula, even different institutions, is thus again matter of recent logical artifice on one side, of practical—or impractical—division of labor on the other: and he thinks best—*i.e.*, most practically and most fertile, most comprehensively also—who, like Kelvin, Pasteur, and many more, can keep his theory and his practice going on together; since he thus advances in thought and in action throughout a doubly fruitful life.

More clearly still—see how our universities, and, following them our schools, insist much on their mathematics, physics, and chemistry, their botany and zoology, anatomy and physiology as "Science"; and on their history and other "Humanities" as "Arts"¹ apart from these; and with correspondingly small insistence on geography, anthropology, and the general and elemental economics which goes with these, and which so largely has developed them—yet say if there be not grounds for thinking it time to reverse this perspective, for the elemental education

¹ Is not the perpetuation of this recent and disastrous division of "Science" and "Arts" as University faculties by recent University reformers an expression of essential failure?

of student and schoolboy alike. For it has long been becoming plain to general thought, and still more through experimental education, that it is in the measure of our elemental geographic experience, and of our simple and practical human contact with the people, (which requires some apprenticeship in their everyday work), that the real and effective attainment of knowledge may best be begun; for the naturalistic, humanistic, and concrete preparation, even the abstract culture, are thus alike prepared for. As this induction gains ground, the "cram-trade" which every modern empire has so deeply imposed upon its current education, begins to lose its conquests and its authority.

Geography and anthropology then, with economics as their prime intermediary, are thus re-appearing above the encyclopedic Babel of studies, and are not only historic and initiative in human civilization and education, but are vital to them now as ever; even indispensable, since the education of the individual requires his initiation into the essential heritage of the race. We may, indeed we must, greatly abbreviate this recapitulation: but when this is omitted, as has now too long been done, we have here a main element towards the explanation of why so many of our graduates are empty-minded after all their long years of grind and cram, and flaccid, too often permanently, after all their exercises. Yet for some of these we may often see how an experience of travel, a change to a new city, a turn at rural or workshop labor, a summer school, an arousal to art, or to social problems and needs—or best of all, the whole of these and more may work wonders. Between the school and university, and the real world, such arrangements for convalescence and re-education have long been arising; yet they still need further organization; and perhaps now most of all in India.

So much then in appreciation of economics, through its early fertile past, and even onwards towards its possibilities. But what of sociology? Here—for the present purposes I may pass by the controversies on social origins—as from horde or herd, from mother and child to family, and so on, and leave undiscussed the gens, the tribe, etc., and also “consciousness of kind” etc., as well. For the present the noncommittal, because the general term, “Folk”, avoids all these controversial questions, and applies equally well in past, present, or future.

Returning, however, from the above educational excursus, and to the preceding general survey, it becomes manifest, even from so scanty an outline, how largely the progress of science has not been merely speculative, not detachedly observant, but has been definitely economic in character; however lacking that conscious and relatively modern name. The economist has thus been at the birth of every science; and has helped its later growths potently as well. From this idea arise many fresh ones, *e.g.* Why not give place in this modern presentment, to this economics of the sciences? and next to their “efficiency management”—no longer simply as of the mechanical industries, but of intellectual activity as well? Might not this even pay—in the higher and realistic sense, and so even ultimately in the lower and money notational ones? In fact is there not opening before us a period in which—now that the resources of nature have been so largely tapped—we may begin to give those of humanity a turn; and so for a change—liberate from them their man-power, mind-power, after so long insistence on horse-power only? Our preceding excursus is thus more urgent than it may at first have seemed.

V

Now for the growth of Sociology; and this around us still in the everyday world, and so far independently of sociologists. Taking the everyday world as we find it around us, in personal experience, in newspaper reading and so on, what are its main interests? What is the run of ideas, and how shall we set this down, so as to get at something of a sociological estimate of it all? Women, as their conversations show, are primarily interested in people. So too are most men, though with a large amount of interest also in affairs, and with more or less interest too in the places where affairs are carried on. People, Affairs and Places; let us look a little further into each of these. The interest in people is, of course, primarily in individuals, oneself and others one meets, and behind these those one reads of; notably in politics and in government,—of course in our day primarily temporal, though a few also are keenly interested in such spiritual government as may survive in their faith or church. The interest in affairs is strong, of course centering in one's own work, of industry, commerce or profession; and increasingly through our time, in speculation also. Very prominent also are affairs of Leisure—games, sports, entertainments and the like, for which the example of the leisure classes has been so influential. During recent years, the great affair of War has of course been prominent increasingly. But long before this, the affairs of Peace have actively been discussed—though as latent War especially. All these interests in affairs of course constantly lead back to people; both to the individuals we know and those we see as prominent; whether in everyday matters of occupation and leisure, in actual combat, or in the direction

of work and of government. But these interests also are associated with places: the industry in factories, the commerce with shops, markets, banks, etc. So for the games as on the cricket-field; for sport, in the forest, and for the war on its extended lines, its fortresses, its battlefields.

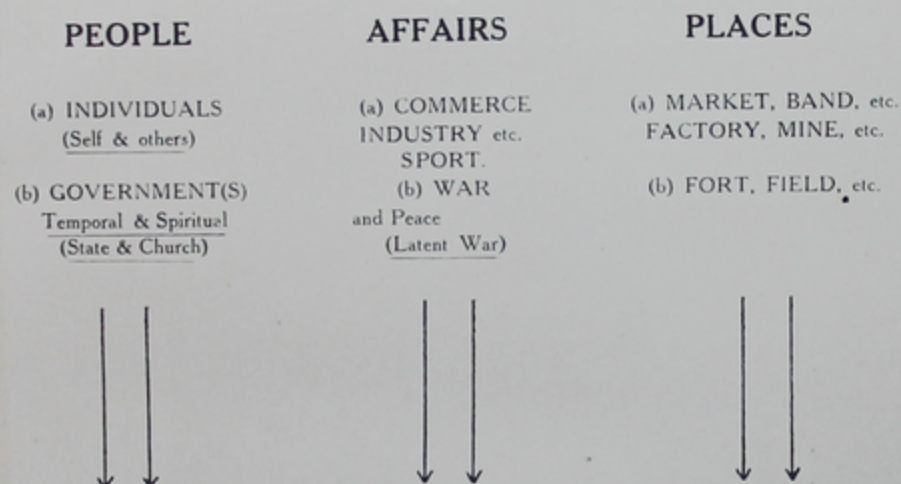
People, affairs and places then: these are what we are all seeking to understand more and more fully; and in this we are more or less helped, sometimes hindered, by our education; using this term in the general sense beyond school and college, in which education is always going on; as obviously in geography from the war, and in the great affairs of its strategy, and tactics. As regards everyday affairs of business, our most prominent educational resource is arithmetic; while as to people, our perpetual criticism of individuals is deeply colored in ordinary cases by our views of morals; and for those in government by our views in politics. Our judgments too, are largely affected by whatever literature has most influence on us; and therefore especially in our day by the press; though the traditions of religions, etc., are significant for a minority. But morals, politics and religion are in most of us uncoordinated. So far our sketch on everyday levels. But for the more educated public, and in a measure for all, law, specially in its active modification or development by legislation, is an appreciable factor in our discussion of politics and government. In affairs, we are more or less definitely associated, consciously or subconsciously, with our school of economics, capitalistic or socialistic in tendency; while our views and interests in people and affairs are appreciably modified from other literatures and languages, the dead often more than the living.

So far we have been roughly noting the main

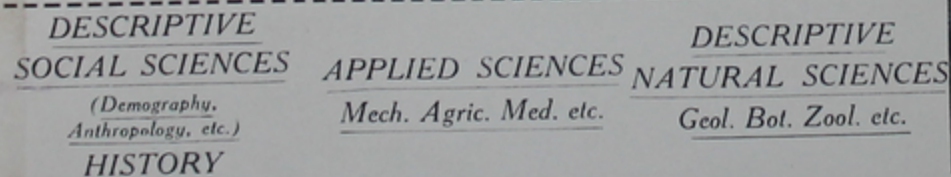
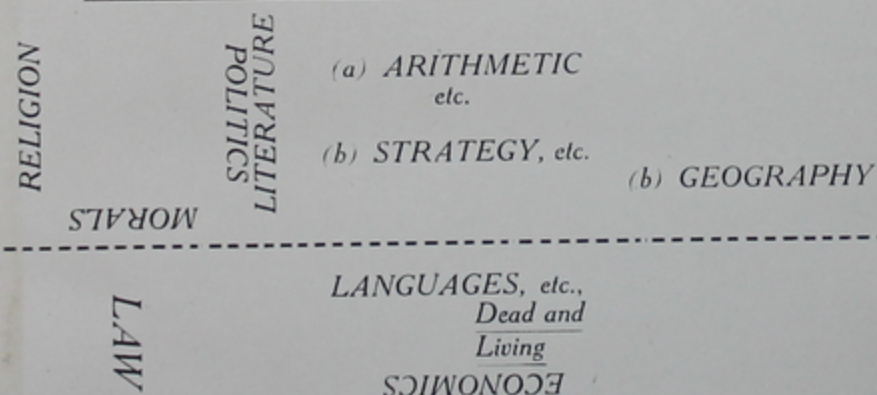
elements of our current education, as they bear on the people, affairs and places, in which we are interested: but beyond all this we must note a small but growing evolution of science in application to these. Thus we often speak of place as "Environment"; and our geography of this, which we all see war so actually turns upon, and teaches, is more or less tinged by the coming in of the descriptive natural sciences, geology, meteorology, botany, etc. For affairs, the mechanical and physical sciences, not forgetting chemistry, have become in modern times increasingly important: while in affairs of agriculture, and in medicine, surgery, etc., the world of science is also a growing one. So with our interest in individuals and in governments, in morals and politics, in literature, in law and legislation, and even in religion: in all these our minds are being increasingly affected by the social sciences; while into our race-prejudices, our national hatreds, our anthropology enters, our views of history also. And all these sub-consciously, even more than consciously. Thus the million readers of Sherlock Holmes—though few may clearly formulate this—are all none the less becoming accustomed to see the old prominence which press and public used to give to rival barristers and their brilliant pleadings, being replaced by that of real investigation of the problem, by the methods of science and medicine, and practically without reference to procedure or pleading at all.

This sketch of the everyday world, and of its educational resources, its changes in progress, may now be tabulated (see Diagram I), of course with corresponding roughness of outline. The irregular (and even upside-down) printing is intended to express the present lack of harmony among the different elements of our ideas.

I. Everyday World (Personal experience, Press, &c.)



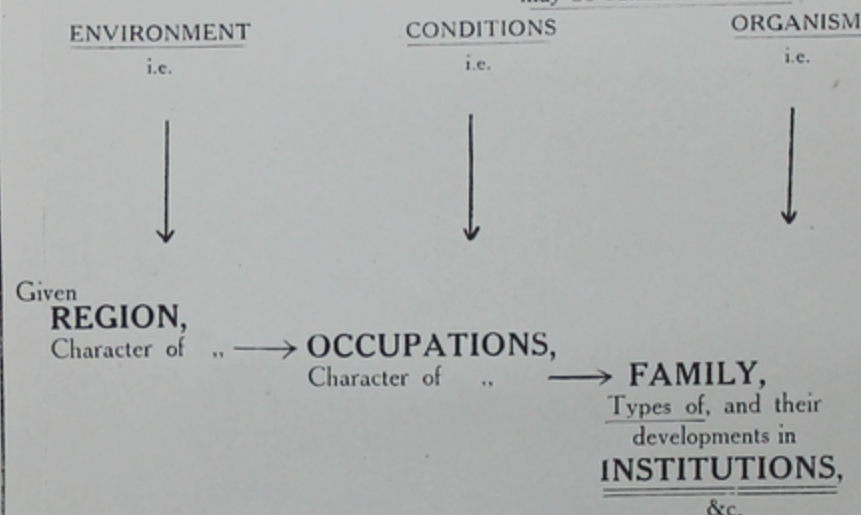
II. Corresponding Education (Specialisms little related)



III. Geographical Interpretation of I.

(More or less applied to II.)

By (a) Montesquieu, Buckle, Taine etc.
(b) Le Play, Tourville and Demolins, etc.
may be outlined as follows:



Hence (III B.) Montesquieu's "Esprit des Lois."

and subsequent literature
of Geographical (Evolutionary) Determinism,
with frequent applications to various elements of II.*

* (For fullest development of this doctrine, see "La Science Sociale," January 1905.)

But since a long time past, attempts have been made to reach some fuller and more general conception of our social world and its thinking. An old method of interpretation, often recurring, and always impressive, is that which emphasises the part played by notable people in government and affairs, in war and peace. This "Great Man" theory has thus been long and fully popularized; from ancient poets to Carlyle and Emerson, to Comte and to Nietzsche, as by historians and biographers without number; and this for the political, religious and philosophical worlds, for those of art and science also.

Leaving this "Great Man" theory as familiar to all, it is important here to note the less familiar converse—that which, instead of starting from eminent men to explain affairs, and even places, starts in quite the opposite way—with the idea that the places have often most to do with determining the affairs, and that these call forth the people who can manage them. With this theory the names of Montesquieu, Buckle, Taine, etc., are commonly identified; while in more recent times less known writers, like Le Play and his disciples, Tourville, Demolins, etc., have carried this further; as many geographers are also doing. In summary, this doctrine is like Lamarck's for natural history and evolution: the Environment conditions the Organism; and thus similarly, the Place determines the People. More clearly stated:—given any habitable region, the character and resources of this will determine its occupations, and so its affairs. Furthermore, these essential kinds of occupation will determine various types of family; and these then respectively develop characteristic types of institutions, customs and laws, morals and manners. These characteristic types of people, who are thus naturally evolved, produce their

representative men, even great men; but these are now viewed as conspicuous developments, rather than as the exceptional prodigies of the more familiar view. Yet while this view has obviously its attractiveness to concrete scientific minds, and to some philosophical ones, its difficulties of explanation undeniably increase as society becomes more complex and mingled, and thus neither Montesquieu's *Spirit of Laws*, nor the subsequent literature of geographical and evolutionary determinism, has won more than a small percentage of the world's readers, and but a less fraction of thoughtful ones. Still, here in outline, we have two great rival theories towards explaining our social world: and however strongly we may prefer one view or the other, few will deny that there is something to be said for the converse perspective. It is time, therefore, for the would-be sociologist to set both doctrines down as clearly as he can: so let us confront them, in debtor and creditor fashion, on opposite pages. But first a word as to the importance of the controversy; and next another as regards available methods.

The controversy plainly raises the largest of issues, and in the strongest form. Viewed philosophically, it is the world-old contrast of fate and freedom, of determinism and liberty; and so it has permeated all the controversies of the past, and is as active as ever in the present. All religions, all the theologians and their sects, have here taken their part and side. Thus at one time men have seen all things "on the knees of the gods"; or even as determined behind and above them, by inexorable Fate; yet at another time we see the gods in opposite mode and mood, inspiring, helping and guiding men, even incarnate in them. For one type or mood of minds there is thus no escape from fate, no modification of the range of

universal law: yet there are also many opposite types, to whom the world seems to offer limitless possibilities of modification in their favor; whether by sacrifice and prayer to sympathetic gods, by evocation of minor spirits, by recourse to powers and agencies of evil, or even by chance or lot. Thus doctrines of Christianity promised freedom, release and hope beyond the traditions of Judaism, so that its evangel superseded the Mosaic Law; but Mohammed largely returned to the older position, and even beyond it, as is shown by the fatalism and resignation of his faithful. Yet even within his stern-walled fold there have arisen thinkers and schools who variously mitigate the prophet's teaching. In every period Christianity has had and still has its rival theologians, now inexorably stern, now more or less fluid and free; and exactly the same contrast is manifest in the controversies of science. Thus, to recall a recent controversy, though neither Weismann nor Herbert Spencer ever took personal stock in Calvin or Luther, it is manifest that Weismann's doctrine recalls Calvin's position, and Spencer's that of Luther. Returning to the everyday world, and to the man in the street, who never reads any of these four, but infinitely prefers the novels and stories of the day, it is plain at a glance that these fall into two great classes—the novel of circumstance and the novel of character; and we come to the clearest types of these in the stories most read by children. For one child there is no book like "Robinson Crusoe", with his shipwreck and his island dominion: yet beside him here is another child who prefers the "Pilgrim's Progress"—breaking loose from his old environment of city and family, friends and interests, and setting forth upon a spiritual quest. True, Robinson develops in character, and Pilgrim has great adventures, splendid battles; so the child of each bias is attracted to

read the other's favorite. For no real story-teller can be as wooden as the scientists, the philosophers, the theologians have so largely been, and fix, with them, on only one side of the ever-pulsating rhythm of life. In this way then, our rival theories of Society must in time become better harmonised, as we come to know life's story; and with this become less one-sided. And so with the long controversy between the mechanist and the vitalist, which runs through the history of biology, and is again active to-day.

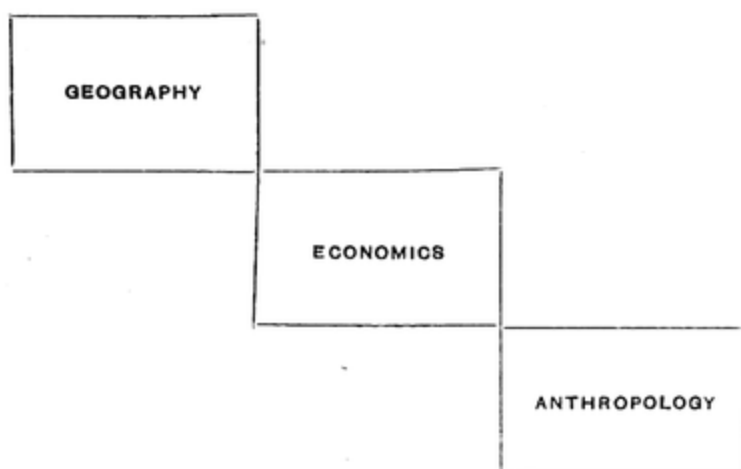
Now the economists have here taken sides also: while for sociology a clear life-doctrine is all important. Hence we need some enquiry into this; though as condensed as may be. For this, however, I may refer to my *Proteus in Evolution*.¹

VII

Geography, Economics, Anthropology. Here are great and well-known sciences—of places, affairs, and peoples—obviously more or less connected, the first and third most frequently. But as yet, by the customary division of labor, which to most minds in our days seems so necessary and so practical, they are cultivated and kept apart; witness the magnificent geographical societies of great cities; for London the Royal Geographical, with its vast and palatial building, its great library, its immense and invaluable collection of maps. Witness too the Royal Anthropological Society; with its library also, and above all, its collections; of skulls and weapons specially, yet increasingly of domestic life, and folk-ways as well. Later than these, but growing in importance, London has the Royal Economic Society, with its meetings and discussions, its Journal and growing library. Recall too the university departments of all

¹ Bose Institute Lectures, 1919.

these subjects, each actively developing; and also coming to have its own internal division of labor, its increasing magnitude of resources, and of staff accordingly. For conspicuous example, take the London School of Economics, which if not yet Royal, has been becoming almost imperial. So, with three such active and crowded lines of scientific activity, who has the time or the hardihood to grapple with much more than his own? Surely each of us must "mind his own business" in whichever subject it may be, without presuming to intrude upon that of the others. This distinction of these three fields, and yet such limited contact, as each does not deny to the other, may now be set down, in graphic fashion as follows:—



Note that the first and third may be similarly brought into contact by bending round our diagram, so that geographer and anthropologist may have also their point of touch. And now to give this diagram more concreteness, let us imagine ourselves planning Institutes for these sciences, upon a vast American university site, its spacious "Campus", on which each

of these three spaces therefore stands for the respective Institute with its interior quadrangle—surely all that can be desired. And let us house in these spacious Institutes, not only the University departments, but its city's corresponding societies also: and their museum departments also, so as to insure more activity, and in each growth by the interaction of the specialist's viewpoint with the citizen's. See then in our first Institute, that of Geography, what possible collections, of maps and globes, of books of travel, photographs, world-pictures, and what not. See next in that of Anthropology, what collections, what armories of weapons—from eoliths, paleoliths, neoliths, to lances and swords of bronze, iron and steel, and what not—it may be even to the captured guns of the Prussians of 1918. What vivid presentment might we not make of the mastery of fire, from "Prometheus" first "Pramath" (the hollow fennel-stalk for tinder), to fire in modern industry and war; and from ancient religion, with its ancient sacrifices and fire-cults, up to our modern Oil Trust, now also appropriately in its turn a dispenser of culture. Of course the growth of domesticity as well; with all its apparatus; with basket collections, pottery collections, and so on: in short, galleries without end, and all with the most careful and analytical of classifications, following doubtless the model of that famous American Museum of Red Indian Ethnology, of which the tale is told of the simple inquirer, who stirred by the wealth of Red Indian stories and novels, asked about his favorite tribe, I think the Sioux, not the Mohicans. "What is it you want to see?" he was asked, "Why, everything: all about them, and their way of life; your general collection of them in fact." "But we have no general collection; you must say what you want. The tents are in the Tents Depart-

ment, the wigwams in the Wigwams Department, the canoes are in the Canoes Department; and here it is." "But these canoes have no paddles!" "Of course not you will find them in the Paddle Department." Is it not this sort of thing—which prevails in principle so widely throughout the great museums, say in South Kensington for choice—the reason why the story-loving school-boy, the picture-loving artist, the humanly interested woman, in fact the public generally, take so little interest in Museums? They tell us they can form no idea from all these analysed collections, of any tribe, of any nation they have heard of, or of any historic period. True, in the best museums of anthropology, we see well modelled casts and figures, even sometimes family groups, and with their homes and encampments, all complete, with tents and gleaming hearths, and with canoes and paddles ready. Yet even for this acknowledged best, is it not still too much on the understanding that this is not "scientific" but "popular" and so apologised for as a concession to human weakness; sometimes explained also as helping, now and then, to bring grist to the mill?

The Economic Institute between these two is more easy to furnish, since here the primary requisite demanded is ample library-space; and we have left around ampler space for abstractions. Yet when the economist is of concrete mind, he will have room at times to arrange—say within his cloister and quadrangle—an Industrial Exhibition, special or general, which may readily overflow into the ample vacant campus spaces on every side.

Geographers, economists and anthropologists thus cannot here complain of any lack of generous provision of space and means for their respective specialisms in this ideal construction. And is not this all realizable enough, as soon as the economist can get the public

to see that the sciences may reward expenditure, each even up to that of an hour of war? Though for the present matter three quarters of an hour at recent rates would establish these whole three, and upon a scale of unprecedented magnificence. So now having done his best to plan for his imagined clients, and according to their present requirements and points of view, may the present planner be permitted to offer them his own conception of the current change in the present needs of these sciences, and in their opening future yet more?

Anthropology, Economics, Geography:—peoples, affairs, and places: all, as we have seen, inter-connected in common thought and capable of view in the opposite perspective—of places, affairs, and peoples. For when the visitor to our first Institute, has admired the maps and pictures, and turned the globes, and even read a good many of the books of travel and exploration, with increasing knowledge of places accordingly—which he notices seem most interesting to the geographer when farthest away, even at the poles accordingly—he gets little or no fresh light on his own place; and generally still less on its affairs, and nothing about its people. Thus, as the writer has lifelong reason to know, Royal Geographical Society has not been the place to learn much about London, nor the Royal Scottish Geographical Society about Edinburgh, though perhaps less deficient. For Affairs he may be politely shown the way out:—by the corner of our plan (p. 31), as it were—to the Economic Department, and similarly for people, through that into the Anthropological one. And so far, he may admit, fairly enough. But in the Economic Department, his first instruction is not simple, as with regard to local affairs. It is now revealed to him that the labyrinth of human as well as cosmic geography he has just left is governed by laws apparently quite

independent of those the geographer believed in, and impressed upon him as physical and organic. For the economist's view of human affairs, with too rare exceptions, even now takes too little note of these: for his students, affairs appear more simply controlled, by a new set of deities, who are now of strangely abstract character—apparently non-physical and non-organic, but highly logical, sometimes also mathematical; and hence with “immutable laws” which his professor, as above recognised, is alone capable of revealing. To two of these various deities the professor of my youth was specially devoted, whom he called “Supply,” and “Demand”: and, though I cannot now completely recall his elaborate theology in full, the general impression remains of them, as playing a sort of Manichean seesaw, as the prime movers of the world. So finding myself of too simply naturalistic temperament to attain full initiation into the labyrinthine arcana of high debate which surrounded his pantheon of economic abstractions, I lost interest, even lapsed from their faith, to my good professor's outspoken grief: but began to ask the Anthropologist what he could tell me of humanity; and specially of the actual everyday people—working people, thinking people, etc.—who peculiarly interested me. But my new monitor began with his collection of skulls, in which I still remember he was peculiarly proud of his large set of those of the extinct Tasmanians. He also explained how, after ten thousand grave-violations, it has been proved by accurate measurements, that some of our predecessors had their heads more or less broad, and others more or less narrow. This of course led encouragingly to the conclusion that those who had not the right type of skull,—that which he presented—were the inferior races. Yet, though of all his guild in Britain, most peculiarly honored in and by Germany, he did

not fully rise to the magnificence of that generalization, which had so potently helped the German to appreciate before the war his complete superiority over other races, such as the Mediterranean peoples, the Slavs, or British Islanders, contaminated as we are by the older stocks. But as anthropology so restrictedly Germanic is now at a discount, we can more fruitfully follow upon (what are still also their lines)—that of the evolution of weapons; which, however, is yet better worked out, elsewhere; for instance, at the Musée de St Germain, and even more simply and vividly at the Oxford Museum: while for the early evolution of art and ornament we may find no less fascinating guidance at Cambridge. There too, and elsewhere, comparative religion is gaining fresh light. But when all is said and done, we are not much wiser about the people around us. It seems at present to be at centres of less academic authority, like Aberystwith, or Aberdeen, or at British Association meetings, that such commonplace inquiries and observations may best be found in progress.

To put all this criticism yet more plainly, the public apathy, which the cultivators of all these sciences sometimes lament, as so general, and which certainly is so British, is not entirely the fault of the public. With all due respect for every active specialism, must not the cultivators of these in their turn admit, that though they are ever discovering more and more, this is too much about less and less:—since in too isolated and over-narrowed fields? We are of course always reminded—though amid such vast Institutes that reminder is scarcely necessary—that our limitations make division of labor indispensable. True, “the shortness of life makes it impossible for one man thoroughly to learn that [geography, economics or anthropology], in which every day some-

thing new is discovered." This phrase is a very old one, it is from a medieval alchemist's *Triumphant Chariot of Antimony*, which was the radium of his discovery; and to which his phrase was applied, as it of course might be to radium in ours, and with peculiar force. But now we know more of antimony than he did: much for practical purposes; yet it does not seriously burden us. So without denying its measure of specialistic truth, we may balance this saying by that of a far greater specialist, one rivalling—some say even surpassing—Newton in mathematics, yet also a productive physicist, a physiologist, a philosopher, a historian and a statesman as well—Leibnitz, perhaps the greatest name of all scientific Germany. His saying is—"the more a science advances, the more I perceive it may be concentrated into little books". Here plainly speaks the generalizing mind, complementary to the specialist's. It is rational then, thus to begin concentrating our three great sciences, and this not only by themselves, but together and in unison. For geography, economics and anthropology—places, affairs and people—we may retain, and no longer lose sight of in our specializing—their elemental and essential unity; as the stage, the action, and the players of the human drama;—here, there, and everywhere. Enough surely, at least for a little while, of contemplating the stage alone, of reviewing the actors alone, from their heads to their costumes, weapons and the rest; and of discussing the condition of our theatre, and the running of our plays on an abstract basis or in monetary details. All these are legitimate inquiries enough in themselves, even necessary ones; but they only become of real use as we come to the drama itself; and for no other reason would we undertake them. In final summary then, these three sciences, with all their learned societies, university departments,

and so on, are but the too scattered specialisms within the drama process of human life, that of places, affairs and people. Most simply, then, of place, work and folk; most generally, that correlation of Environment, through Function, with Organism, which is the fundamental process of all life; from the simplest upwards, to our own.

But if this be so, these three great sciences form each one-third of a larger science; which is obviously Social Science proper; in a word, Sociology. Far from losing any of these three notes of thought, we thus combine them as a single chord. But if so, these three great and wealthy, numerous and Royal, Societies, with their university schools and departments to match, are really in principle—and in destiny—but so many large “standing committees” of the poor little Sociological Society, though this be not as yet much known to the public, much less patronised from above. And though we must admit that the previously more important bodies are as yet unconscious of their real greatness, their approaching future, the formation and recruitment of this last Society,—largely as this has been from the most open and synthetic spirits among these older societies and university departments, is a good augury; that all these may soon be realising the possibilities of their coming career in harmony and coöperation with this, and with each other. This harmony is indeed pre-established, since the very dawn of life; and it was in principle re-established, with the coming in of scientific synthesis, of which there have been so many forerunners and champions; among whom Comte, Le Play, and Herbert Spencer were the three mighty men of the past century, with Darwin too for the fourth; and with perhaps as many as thirty more, also mighty, though of less and varied degree. But in the present social

situation and transformation—which as already affirmed, at least ranks in importance, if not even exceeds, those of the French and Industrial Revolutions, with those of the Renaissance and Reformation, perhaps most of all with the great expansion of the Middle Ages at their best, at the close of the dark ages of barbarian invasions—this movement, of synthesis among the sciences, will soon be fully realised in every country, and in every university. For these can no longer be content to go on in their present state; variously mingled as it is, of pre-Germanic survivals, with more or less of sub-Germanic dis-specialisms. The formation, in every university, is thus beginning of at least a nucleus of active minds, towards thinking out the real and vital presentments and interrelations of studies—irrespective, therefore of the traditional and professional limitations which are embalmed into “Faculties”. Here even is a promise, which soon will be a conscious and definite beginning, towards the formation of the sorely needed Post-Germanic University accordingly. Within its ever-increasing synthetic effort towards the unattainable completeness, every existing specialism will thus soon find the increasing resources and more intensive cultivation it has too long alone desired. But it will now grow and branch, upon its own asymptote, with new life and vigor, since related, cross-fertilized, and re-inspired by other studies, and these again by it, in ways sometimes already manifest.

So far well—the reader may say—a pleasing Utopia? But also he will rightly ask, with economic matter-of-factness, how are these synthetists to “deliver the goods”? For beginning, return to the plan of our three Institutes—Geographic, Economic, and Anthropological (p. 31); and let us plan out extensions, and this boldly. Their three quadrangles now may be increased to nine, as their respective positions suggest

(See Fig. 2 below¹) and thus we prepare to connect them up: we shall soon occupy them. For if our dream of synthesis is to be made good, we must give clear space to these inter-relations; and thus we do so without interfering with the specialist work which at present goes on in each. The relations of Geography and Anthropology, as the oldest and most obvious, may here be taken first. Thus the traveller has always been accustomed to describe not only Places in Nature, but the Folk-Places he discovers or comes to; *i.e.*, villages, towns and cities; and these often with their types of

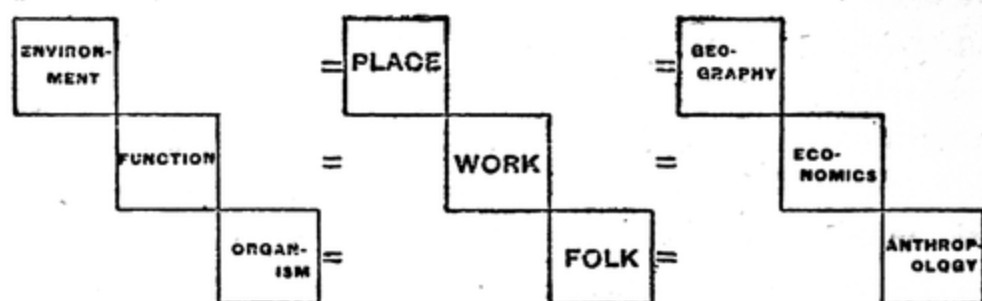


FIG. 2.

dwellingings. Similarly, as anthropologist, he seldom now merely brings home skulls, or other plunder: he sees each Folk in its place—as Place-Folk,—“natives.”

Thus he is beginning to re-act with the main conception of Economics. Between the Place in nature, and the Folk-Place, he finds the Work-place. This is at first dispersed through nature, as in forest or jungle, for the gathering and hunting of the simplest peoples, and of children and others to this day. Yet is increasingly localized also; as upon lake, river,

¹ After Form 4 was printed off two omissions were discovered. Section VI commences at the top of p. 27; and the diagram on p. 31 should have been marked Fig. 1.

or sea-haven: for fishing and so on. Above all, of course, it extends over the cultivated fields, the vegetable gardens, the fruit-groves or rice-terraces which may surround the village or town. All these then—onwards to the technical workshop, and more—are forms of work-place. Our place-studies are now extended, by help from the allied sciences, and henceforth in co-operation with them.

So far then from abating any existing interest of the geographers as we find them, our argument is to do them a service, to clear up in their existing descriptions of places, the Work-Places and the Folk-Places, and these in their economic and anthropological relations—to produce an orderly paper, which might be developed in detail, and for discussion at any Geographical Society, conveniently in the “research department” which each has been initiating, apart from their public meetings for explorers’ results, etc.; and if found of sufficient interest, thereafter printed in their Journal, with its definite suggestions towards the more orderly survey of the “human geography” they have always been interested in.

This draft of a paper admits of improvements; and especially as regards co-ordinations with the kindred papers, to the Anthropological and Economic Societies, which its principle suggests. Hence figure 2 (p. 40), which expresses the outline co-ordination of these, with each other, and with the essential concept of Biology, that of the interrelation of Environment and Organism, as Function.

These may now be more fully related. First as regards anthropology; it is obvious that by applying the geographical conception of Place to the anthropological conception of Folk, we get the compound idea of Place-Folk, *i.e.*, Natives or Neighbors. And similarly applying to Folk the elemental economic idea of

Work, we get the idea of Work-Folk. Of course every true anthropologist who thinks beyond mere skull or flint-collecting, has both these ideas already; yet there is gain in clearness when we now set down (See Fig. 3) more clearly each on its own space upon our plan:—Folk in general, (2) Folk viewed as Work-Folk, and

<u>PLACE</u>	PLACE-WORK	PLACE-FOLK
WORK-PLACE	<u>WORK</u>	WORK-FOLK
FOLK-PLACE	FOLK-WORK	<u>FOLK</u>

FIG. 3.

(3) Folk viewed as Place-Folk. That is one familiar anthropological perspective; while this suggests also the converse one, of Place-Folk, Work-Folk, and Folk in general. More orderly descriptions may in this way be obtained; a great help to every science which agrees

on this; and thence next for cognate studies. Thus Linnaeus's orderly herbarium has developed into the card catalogue of libraries, the orderly bibliography of most skilled workers in all departments; and this is now-a-days rapidly superseding the books of business undertakings, and even the pigeon-holes of administrations. So in the same way, his establishment of our orderly method of description for plants and for animals, for humanity in its varieties, has similarly to be adapted to improve the descriptions of other sciences, and this specially of the complex social ones. But for this it is necessary that the method should be in its own subject sound, and to other subjects harmonious also.

Let us see if this latter condition be reached as clearly as the former. The vertical columns of geography and anthropology in our diagram are now complete. It is thus plain that Place, Work-Place and Folk-Place are broadly parallel to Folk, Work-Place and Place-Folk, and also reciprocal to them, and so far exactly. Place is the environment of Place-Folk. Work-Place is the essential environment of Work-Folk, and similarly Folk-Place is the environment of Folk. But as the diagram now stands, (Fig. 3, p. 42) only its middle horizontal row needs completing. In this row Work-Place obviously functions on, and so far determines, Work-Folk (shepherds, peasants, fishers, miners, etc.) through their economic occupation, their Work. It is thus obvious that the economist, given a sufficient alliance with geography to visualize clearly on the one side the concept of Work-Place, and with anthropology on the other for the concept of Work-Folk, has his ideas of Work more clear; and is so far less open to the reproach of his traditional abstractness of treatment.

But even the abstract economist may say, and so far truly, that he has always been doing this, as

in his familiar formula of "Land, Capital and Labor", as also in his constant reference to "the market"—the Work-Place of commercial transactions. Granted so far. But the economist's disputes with others show that "land" and "market" are not definite enough, not local and regional enough, to satisfy any geographic mind: nor has his conception of "labor" been usually concrete enough to satisfy any anthropologist. Hence to these kindred sciences, it seems that much past economic literature has been too simply "camouflaging" an insufficient observation of these—a deficient regional and human interest—by spelling "Land and Labor" with capitals, and so failing to associate them with real places and their folk, too easily content with these isolated rectangles of abstraction with which they reproach economists.

Of course it is here again necessary—indeed with common honesty—to recognise that already in some cases fully, and often increasingly, the economist has been freeing himself from this reproach. Witness Charles Booth's Great "Survey of London"—a careful account of the great city in terms of Work-Folk, Work-Place, and Folk-Place as well. Similarly Mr. Rowntree's "Survey of York" tells of its Work-Folk especially; but of their Folk-Place (Housing) also. For Indian illustrations we have similar good examples; for instance, the recent "Survey of a Deccan Village" by Principal H. H. Mann and his pupils, while recent studies by the editor of this Journal are similarly exemplary in their regional and concrete survey of Work-Place and Work-Folk together. All these clearly express that essential unity of social science, and of its three great components, which this argument is only seeking to make more clear, and to tabulate accordingly.

But our column of Economics is still incomplete. What do its upper and lower squares stand for? Apply

our geography to our economics; *i.e.*, the idea of Place to that of Work. The resultant compound idea is Place-Work. An unfamiliar term, indeed: yet only at first sight: a moment of reflection shows that "Place-Work" expresses those conditions of natural place which are the determinants of its Work; namely its "natural advantages", its "resources". See the game, the fruits, the roots of its forests and jungle for their primitive Place-Folk; or their workable flints or other hard stones, or the fish of their river or their sea, so for the pasture or the fertility of the soil and so onward, to the coal-mines of today, to the water-fall for to-morrow. Similarly for the natural advantages and resources of communications and transport, like the mountain-pass or the passable ford, the possible route for a road, the practicable haven, and so on. Note that Place-Work is thus not the same as Work-Place. It is these natural advantages which has developed definitely the Work-Place; and thence the Work proper, and the Work-Folk accordingly: like the caravanier, and the inn-keeper on the pass, and so on:—say to the sheep-fold and the thrashing-floor; to the pit-head and the minegallery; and so on, to the light-house and its keeper. Work-Place, Work, and Work-Folk are thus originally conditioned, not merely by place, but by its Place-Work; *i.e.*, this or that natural advantage, as it becomes utilized or "developed".

There remains now only one square to fill up; and for this the economist's Work has to be compounded with the anthropologist's "Folk". We have thus Folk-Work. What is that? Obviously but a vernacular (yet systematic) expression of the familiar economic idea of Occupation. But this in all countries may readily become hereditary; and peculiarly so in India; so we have here a prime factor in the formation of Caste (though of course not the only one).

As an example of the clearness of which this notation, like every definite and general one, brings, it may be further noted that Occupation is "*folk-Work*", whilst, when we emphasize the other term of the combination we may say that Caste (so far as occupational in character) is *Folk-work*. And similarly turning to the compound term Place-Folk, we see that "*Place-folk*" are "natives," while "*place-Folk*" are neighbors. The first is the more fundamental conception for the geographer and generally for the anthropologist as well; yet the second is the every-day practical—*i.e.*, economic—conception; as every trader, postman, and policeman knows.

This is not mere refinement, but humanly significant; as may be seen by considering Work-Folk in the same way. For the economist, with his "*Work-folk*," the Work is the main thing; but for the anthropologist, the work-Folk are the essential matter. But if so, have we not here an elucidation of the long blot upon economics—its too easy tolerance of exploitation, its too long-continued view of laboring humanity as a mere means, and too seldom as an end? Yet this attitude of the economist, as we here see, was not due to any subornment by the capitalist, as labor too often thinks, to this day. It was the only-too-easy half of this converse perspective, the acceptance of Work-folk, as the primary concern for the immediate productive problem.

The humane economists, from Sismondi, Ruskin and Marshall onwards have enlarged this conception, by appreciation of the complementary work-Folk point of view. As the extreme of the Work-folk view-point, we reach the slave-driver: and so, as logical economists, we should have had to invent him, if he had not long ago, and only too naturally and fully, come into existence. Conversely the work-Folk view-point advances

us to the effective direction of the peasant or fisher father to the beloved son who must soon inherit the field and plough, or the boat and nets: or again the mother's gentle direction to the daughter in the affectionate and skilful tending of the home, of the tired father and the little children, and of their vice-mother, the cow. Are not these extremes, these contrasted perspectives of the human past, even the actual present, which seem so perplexingly mingled to those whose approach is that of morals, or of "human nature"—now more clear before us in terms of these contrasted perspectives, these varying accents, of our simple general term—Work-Folk? If so, upon our choice of accent in the opening future, do not its alternative possibilities largely depend?

VIII

Here with advantage for clearness may be recalled the determining life-moment, and the main activities, of Frederic Le Play, by whom our main triadic way of looking at social life was best initiated.

How did he come to this main idea of his life-work;—this correlation of geography, economics, anthropology into his simple yet potent formula, of "Place, Work, Family"? He was an active young mining engineer like any other of his day, or still in ours, thinking essentially of his immediate specialism, of mining. While prosecuting a research, he met with a severe accident, and thus lay on his back for months, recovering and reflecting meanwhile. In the course of this enforced leisure and its meditation, he underwent, like Ignatius Loyola in similar circumstances, the "conversion" which determined his after-life, though of course in his own characteristic direction, and that appropriate to his life and times. Le Play's

discovery—his corresponding moral awakening and resolve also—was in answer to such simple questions as he asked himself—*e.g.* “After all, what is this mining—say copper-mining—for?” Here the common answer, which modern people still naturally give, even unanimously for a whole audience, is simple enough—“Why, of course, copper.” So far, of course, true: the world needs copper. But is this answer of industrial economics the only answer? From the human view-point, is it a sufficient answer? What Le Play—thus advancing beyond his merely technical stand-point, and to the human one—came to see, was that this is not the main answer at all. What flashed upon him, as a new discovery, a life-long conversion, was this—that while industry, up to its highest technical efficiency and output is desirable, yet all this not as the end, for which he just had begun looking, but only as a means to that end. In short that life is not merely for Labor: but that labor is for Life. The master of any copper-mine knows this, so far as he himself is concerned; for he does not hoard his metal, but exchanges it for his needs of life: and this—generally speaking, practically universally—not only for his own maintenance, security and comfort in old age, but for the maintenance of his wife and family, up to the standard he and they think desirable, and with further provision for their future lives, after his own. In short, the hardest and most extreme economist’s exploitation, even the slave-driver’s, is not merely for the yield of cotton: still less for mere pleasure of cruelty: but for the man’s own life; and his family’s also, indeed even more. The strictly individualistic “economic man” was thus, as economists now freely admit, essentially a fiction. Economic competition, between two birds for the same worm, two unemployed for the same job, or two millionaires for the same railway or mine-concern, never reaches its

keenest, save where each is eager to take that worm home to his nest.

Here, as the world is apt to be now-a-days resentful of even the mildest approach to such logically severe methods, another story may be told parenthetically—Jataka fashion—before finishing with that of Le Play. It is of a young man even more highly intelligent—a Scottish farmer, ruined like so many others in his day mainly by economic changes beyond his control, or even understanding. In disappointment and misery, he saw no bread-winning or hope before him at home; and so took his passage for the West Indies, there to employ his agricultural skill, and his influence over men, which were both considerable. But in plainer terms, this career, at that time, could only have been a slave-driver's. And our young man was far too intelligent and well-informed not to foresee this, and face it. Yet this was no less than Robert Burns, then, and to this day, the most democratic of poets. What might have been the consequence? An additional Legree murdering an additional Uncle Tom? Or an anticipation of the career of Toussaint L'Ouverture, hero of Negro emancipation and taking Napoleon to crush him? Are not these the two main alternative romances of his biography?—though, in the real one, he was happily stopped from sailing.

Returning now to Le Play, we next saw that what is so obviously and fairly true for the mine-master is equally true for the miners. Still less can their working for metal be explained, for its own sake: they mine metal for their wages. So Le Play, being of no money economist's education, but familiar with all the concrete sciences of his time, saw "Wages" as "Real wages," of which the money is the meretransient symbol.

Here again in parenthesis it is of course to be recognised that every economic teacher worth the name

has made this distinction. But, none the less, has he not conspicuously failed to teach it to the great world he has otherwise so deeply influenced? How few even of workmen really know this? How few are really immune to that world-obsession of money, which has been increasingly characteristic of our economic epoch, not only clouding that joy of invention and manufacture which was so characteristic of the first generation of the industrial age and went on into the second, but practically concealing for most people the vital conception of real wages, and profoundly obscuring the essential objects—the uses—of the industries themselves. Witness not only adulteration, as the extreme case of mammonised industry, but the depression of art production, which is on the higher technical level. And even in this first respect, and far more in the second, we cannot hold economic literature blameless. Even for the great Bentham, prophet of Utilitarianism, “push-pin is as good as poetry”.

But the technician will say—“Was not Le Play here on a dangerous path, at any rate for his own professional efficiency, which he had till then been in hopes of developing?” We shall see later. But in the meantime, return to this sick-bed conversion, and see the conception to which he came—that the mine, the metal, and the money wages, are operations incidental for the miners, and carried on by them for the sake of their “real wages,” *i.e.* real environment:—resources of home and its furnishing, clothing and food as good as may be, not merely for each individual worker, but for the whole family, of which he is but the externally active member: with the house-mother as internally active member, and with her children as more and more the focal object of both their activities and processes. Thus, briefly summarised, Le Play’s discovery was that the object and use of the metal-

mine was not merely good metal, but goodminers. Good-Miner-Families that is; Work Folk and Folk together. (He did not in this forget the masters, as economists of later sects have done, and are now doing in Russia and nearer countries).

Here then, from this idea arose Le Play's *magnum opus*—his "Social Monographs" of the whole conditions of working life—and especially of the real wages of typical workers, and work-families, representative of many occupations, and these throughout many countries of Europe—"Les Ouvriers Européens"—of which the many volumes have been continued by his disciples, and sometimes with increasing skill and interpretation, as should be. Thus too, in Le Play's later life, there arose around him a group and Journal—"La Reforme Sociale"; and next from this, about thirty years back, arose a fresh group, of more skill in human geography, headed first by De Tourville, and next by Demolins, whose books (especially the poorest of them—his "Anglo-Saxon Superiority") came to wide success, even in our island, though then so well-protected, by old war-prejudices and mingled pre-Germanic and sub-Germanic education, from the access of French ideas. With the first of these two schools, and the initial Monographs essentially, Charles Booth came into contact; whence an impulse to his London Survey, and to subsequent investigators as well: so that Le Play's term, and task, of two generations back and more—the investigation of the "Family Budget"—has now in recent years penetrated the long Anglo-Germanic isolation of the London School of Economics; and has thence been filtering, and no doubt more directly also, into other economic departments of our universities.

But now the reader may return to the mining expert's question above, and say "all very well perhaps, considered as a fresh departure, from copper-

mining to family-budgeting, of miners and other people. But what are we to do for copper, if our mining engineers thus go off visiting? So far as we are concerned, might he not as well have entered the church?—like Loyola, who, whatever he and his Jesuit order may have done, was certainly a dead loss to his formerly promising Spanish military career.”

Not at all. Having thus grasped the vital unity of his special Work with Place on the one hand, and yet more with (and for) Folk on the other, he was henceforth not simply the most concrete and productive of humanised economists in the too scanty history of that department of the science: but, with his recovery, his engineering activity and energy were intensified beyond measure also. True he had henceforth a heavy handicap, that of his notorious “interest in the condition of the working classes,” an idea which if not positively socialistic (he was always too paternal for that) seemed then more dangerously “unsettling” than now; and this especially in the capitalist circles to whom he had to look for employment; and at best as an amiable “fad” in other circles as well. But now stirred to redoubled ambition he soon rose, by sheer skill and efficiency, to the very top of his profession in France. Thus he was called to the principalship of the French School of Mines—which he soon made the most efficient in Europe; and the most educative technically, (though how far still socially also I somewhat fear to enquire!). Thus keenly interested in his profession, and in every technical detail of its advance, he went on visiting mines more than ever, all over Europe. Thus he came to England no less than seventeen times: while his critical knowledge of the Ural mines became so thorough that the Russian Government obtained his services and advice as their Inspector-General; and profited accordingly, in gold and platinum and more. What better example—though there are happily others—of how

a good specialist, when awakened to cognate interests and wider thought, thereby becomes a greater man in his own department?

Le Play's combination of ever-widening technical knowledge of Place and Work with corresponding social survey and insight,—Work and Folk—next found a fresh combination between these, and again on the great world-scale. After the first International Exhibition—that of the Crystal Palace in 1851, there was a lull, if not even a slump, in such undertakings. But France—which had first initiated on a small scale, and discussed, even planned on the great scale, International Exhibitions for nearly two generations before England carried the idea out to success in its day—now again resolved to recover her initial primacy: and so naturally enough her Government, looking round for their best and fullest technician, called on Le Play to take up the planning and direction of their great scheme for 1867. The Palais de l'Industrie,—a huge oval building long familiar to visitors to Paris until removed for the Exhibition of 1900—was his main edifice; and its arrangement expressed his grasp and clearness of mind. For the essential departments of the exhibition—Mining, Agriculture, Manufacture, Transports, Housing, Clothing, Food, etc., with their subdepartments,—were all arranged in radial series, and so made easy of comparison: while all the goods of the various contributing nations were given circumferential arrangements, the greater on the outer ellipses, and the smaller on the shorter ones towards the centre. Thus, walking radially, one could compare say the metallurgy, or the textiles, of different countries: while, roaming parallel to the circumference, one could review the characteristic productions, in all departments, of each of the countries, great or small; yet each equally well shown. Of course difficulties in detail arose in carrying out this design; but minor

annexes and external buildings for exceptionally bulky or special products were provided. Thus the arrangement was a success, as the world's first clear and comparative Museum of Industry; though our economic literature has yet fully to utilise its method and example.

This clearness, as the reader will have already noticed, arises from Le Play's grasp of Place and Work, his habit of illuminating Economics by Geography, and conversely. But what of the Folk of his conversion—had he forgotten them? By no means. Beside this palace of Industry, was that of Social Economy—for this at length familiar term was here first popularised by its author—and in this the Family Budgets of his representative types of the European worker were exhibited in graphic fashion; and with illustrations of co-operative, philanthropic and other undertakings for the people's weal.

These same principles have been essentially followed in the subsequent Paris Exhibitions of 1878, 1889 and 1900; and they have of course influenced the minor ones of other countries, often also to a department of Social Economy: so that though Le Play was never officially a professor of economics, in the ordinary sense in which he so long taught mining, he thus did both lines of teaching, and on the world-scale. Hence in fact, whoever has seen any industrial exhibition, has been in Le Play's Museum of Industry. And though the vastness of the Paris Exhibition of 1900 may for most visitors have too largely obscured the simplicity of his great initiative in arrangement, its influence was still there. Above all, his department of Social Economy was plainly there; and on the great scale it deserved, both for illustration and for public interest. Geography, and often with it a vital unity of Regional Surveys, was well presented

throughout the Exhibition, in fact more widely, fully and vividly than ever before or since. Thus, in short, his doctrine of Place, Work and Family underlay the whole Exhibition—far more fully even than most of its contributors, or of its public, clearly realised, yet from which they must have absorbed more also than they knew. To all this I can indeed peculiarly testify, as mainly responsible for that organization of the system of educated volunteer guides and interpreters to the Exhibition in all its departments, which carried on its work throughout its course; and so as occupying the spacious basement of the Palace of Social Economy, for its whole duration, and indeed for months of preparations and conclusion as well, before and after.

IX

The Geographer may here justly make a threefold complaint; (1) that I have here omitted all references to the predecessors of Le Play, to whom he of course owed much, as notably to Karl Ritter: (2) that I say nothing of his contemporaries, like Buckle, and (3) as little of others who more recently have been, or actually now are, carrying on geographico-social interpretations more or less independently of Le Play. All admitted; but this is not the place for the appropriate bibliography which I hope some day to publish. I but use Le Play's teaching, and his disciples', as (what has always seemed to me) clearest and most generally constructive; and so has been most helpful and suggestive to my own studies, of which what appears to me main conceptions are here outlined, but now re-stated, with such developments and corollaries as I venture at present to offer. To the student who desires fuller information as to further work and thought among human geographers generally, it may here suffice to recommend (1) on the

larger scale, the *Geographie Sociale* of Ritter's main successor and surpasser in comprehensive geography, Elisée Reclus; and with this, and from the anthropological side also, the many papers and lectures of M. Schrader in the *Journal de la Société d' Anthropologie*; (2) on the smaller scale, Dr. Newbigin's excellent little *Geography* (in the "Home University Series") will be found useful; while (3) for fresh and comprehensive interpretations bearing on contemporary and opening problems, Prof. Fleure's *Human Geography in Western Europe* ("Making of the Future" Series, published by Williams and Norgate) will be found not a little suggestive and stimulating. Of (4) strictly Economic Geography I need hardly here speak; as its books and bibliography are presumably in every department of economics: but (5) Herbertson's *Man and his Work* will be found the simplest introduction of all those above-named to Le Play's viewpoints and methods especially. Still Demolins' journal, *La Science Sociale*, and his various books, not yet translated, are still the main documents of this school. The reader may find most interesting *Comment la Route crée le Type Social* and *Les Français d'Aujourd'hui*.

(To be concluded)

CO-OPERATION AND THE STATE

C. F. STRICKLAND, I.C.S.

The agricultural and industrial development which is expected to follow the restoration of normal conditions after the shock of war has created in all countries an increased demand for State organisation and assistance. The tendency to rely on State initiative and support, always marked in India, has been reinforced by the report of the Industrial Commission and the evidence hitherto given before various agricultural Commissions. A tendency if carried to excess becomes morbid and the disease may attack and weaken a healthy movement. It therefore behoves co-operators to guard jealously the autonomy of co-operation, and to shun all suggestions of needless State intervention.

The admitted function of the State with regard to co-operation is to aid in the work of propaganda, education, and organisation, but at no time to pauperize or minutely to control the citizen who has undertaken to develop his own powers in union with his fellows. Except in the first stage, when the meaning of co-operation is unknown to the public, Government money should be unnecessary; if the movement is sound, it will draw money from those who have it to invest, and I have no hesitation in expressing my personal opinion, that direct financial aid from Government,

when not absolutely indispensable, is harmful. The epoch of expansion is at hand, but co-operators need no loans from the Paper Currency Reserve, no, Government guarantee of any co-operative institution whatever, even of an all-India Co-operative Bank, and no pressure upon the Presidency Banks to finance Provincial or Central Co-operative Banks. If Co-operative Banks are sound, they will obtain the confidence of established Joint-Stock institutions, and funds will be available in abundance at a fair market rate of interest. They will restrict their dividends and build up an increasing Reserve: an adequate amount of fluid reserve will be held.

Circumstances differ in every province, and it is seldom that a critic can take due account of the peculiarities found in other neighborhoods than his own; but in support of the emphatic opinion expressed above, I may refer to co-operative finance in the Punjab, where the plethora of deposits from the public causes continual embarrassment; cash credits or overdrafts are readily obtainable by Central Banks and Unions from at least three of the larger Joint Stock Banks; one Bank has agreed to discount co-operative paper at a moderate rate of interest and the rate of interest paid on deposits by the larger co-operative institutions now runs from $\frac{1}{2}$ to 1 per cent below the rate of Government paper. Funds are provided without difficulty for any co-operative scheme which is shown to be financially secure: the Central Banks must ask for a reasonable prospect of success in any new venture which they support; and the expansion with which we are threatened or tempted will be limited not by shortage of money but by the uncertainty of new undertakings. Co-operators must be sure of their ground; they are not "entrepreneurs" in new fields, agricultural or industrial; and while

applauding the triumphs of an Agricultural or an Industrial Service controlled by Government, co-operators as such should handle nothing until it has been proved. They will then require no direct financial aid from Government, and it is at all times more satisfactory for them to stand on their own feet.

Similar though not identical considerations apply to the question of official staff.³ For the present a large measure of supervision is desirable, in order to ensure the confidence of the public and to instil in the co-operator the true principles of unselfishness and caution. But the ultimate end is co-operative autonomy; and the creation of a Co-operative Service of Government employees, reaching down to the lowest grades of Supervisor and Sub-inspector, will stereotype and perpetuate the official agency in a manner that must hamper the growth of freedom. The wise course for the progressive co-operator is neither to demand an independence which he has not yet developed the power fully to use, nor to surrender himself to a system within which he cannot grow. A staff of gazetted officers, Registrars and Joint or Assistant Registrars, and a cadre of Government-paid Inspectors who will unite educational attainments with practical knowledge of co-operation, is at present essential and will probably never be superfluous: in this respect India need not fear that she is being treated as inferior to other countries: a measure of official supervision is required in England, Germany and everywhere. But the object in view is to relax the control by degrees, and to pass on the burden of teaching; a Provincial Union or Federation, with inspection and advice through local Conferences, Central Banks or Unions, will gradually relieve the official workers of their more detailed duties, and we may look forward to a time when, provided that they

are content to learn their lesson, to qualify themselves instead of grasping hastily at an authority which can only be exercised with experience, honorary agents will guide the entire movement of co-operation in India, the Registrar and his staff confining themselves to the annual audit and the more formal duties imposed on them by the law.

Each province will find its own path of evolution and devolution. In the Punjab the future controlling agency should be the Punjab Co-operative Union Limited, to which delegates are sent from all Central Banks and local Co-operative Unions, whether of Supply or Credit: the Union is responsible for the appointment, payment and dismissal of Sub-inspectors, who in this province are not paid by Government but by the contributions of Societies: it also decides the main questions of financial and administrative policy, and the permanent Committee, for the present under an official head, remains continually in touch with the movement. Local Unions have always been unofficial: they are being encouraged to carry out more fully their function of mutual supervision. Central Banks have hitherto presented an officialized appearance: several have now unofficial Presidents and all are increasingly controlled by affiliated Societies. The official Presidents may be expected to withdraw from all the larger Banks as local talent is developed. It has been proposed to hold District Conferences at more frequent intervals, and to diminish their official management as rapidly as may be.

The creation of a Government service of Supervisors, Auditors and Sub-inspectors can only impede this healthy growth. Even at the sacrifice of a certain measure of efficiency—though such sacrifice is not inevitable—co-operators should become self-governing within the law.

To these policies of State finance and State control

is sometimes added a third which is in itself disastrous and further is directly opposed to co-operative principles. The suggestion has been made, that co-operators and co-operative bodies *as such* should take part in political affairs. On this theory seats for co-operators are to be provided on local Boards, District Boards and even on Legislative Councils and it is vaguely argued that by this means the agriculturist or the town laborer should be educated to express his "grievances" and to secure representation for himself. There is no question that the representation of these classes on public bodies is eminently desirable: but non-co-operators should not be excluded, and the venom of political feeling should not be introduced into what is essentially a non-partisan and non-denominational body. To use the co-operative society as an electoral unit, or to give co-operators *as such* a seat on any administrative or political board, unless its functions be purely economic, will re-create faction among those who at present are learning to drop their differences and unite for a common end. Co-operative activity builds up the minds of citizens, trains them to think, to express their opinions, and also—a most valuable lesson—to submit to the majority, but all these virtues and powers when acquired can be exercised by the citizen as such in his political life: in no case should he drag in irrelevant matters to his co-operative activity. Citizens may differ in their politics, but there is no reason whatever to echo their differences in the Society. Where such a political form is given to co-operation, as in Belgium and to some extent in Italy, it is admitted by co-operators to be a defect. In Germany and England the movement has hitherto avoided any other than an economic interest in political matters. The recent decision of English co-operators to put forward their own candidates will be

deplored by all who hold the purer doctrine: the error is due to the regrettable limitation of co-operation in that country to a single class. A national movement embracing both producer and consumer, which we hope to see in India, must find means to gather supporters of every political opinion at peace within a common fold.

A NEW ECONOMICS COURSE

AS PROPOSED FOR THE UNIVERSITY OF ALLAHABAD

A Conference of the professors and teachers of Economics in the University of Allahabad and the various colleges affiliated to the University was held in March, 1919, with a view to formulating proposed changes in the courses of study in Economics for consideration by the Board of Studies. The latter is only to a small extent representative of the teaching staffs of the colleges; and it was thought well, before making extensive changes, to invite the assistance and criticism of a full conference. Professor Jevons was Chairman, and Professor H. W. Lyons, of Indore Christian College, the Secretary of the conference.

The result of preparation by the Conference, and subsequent revision by a meeting of the Board of Studies, was what amounted practically to a totally new syllabus. The B.A. Course now extends for two years; but the Conference desired that an Intermediate Course, introductory to it, should be established. This suggestion not having been adopted yet by the University, the revised B.A. Course had necessarily to include elementary matter which if an Intermediate course should be established, would be put into the Intermediate.

With this explanation we think that the Courses as revised in March, 1919, by the Board of Studies are of

sufficient general interest to be worth publishing in this Journal. It will be observed that there are certain new features introduced, which are not found in the economics courses of most Universities. These were introduced because economics is taken by many more students in the University of Allahabad than any other subject; and it was felt that everything should be done to give the subject as much educational value as possible; that the standard should be raised somewhat and the graphical treatment of theories insisted on with a view to bringing economics into line with the natural sciences, as regards its qualities of mental training and disciplined thought. Considerable emphasis has been given to practical work, both in relation to Courses and in the study of machinery and local industries.

As economic conditions vary widely in India, through differences of climate and physical features of the country, the student of economics needs some introduction to geography before he can apply his knowledge of economics to the conditions of his locality and of his province. The B.A. Course begins, therefore, with an introduction styled Elementary Geography, and this passes on naturally into the study of Transportation. The study of Social Progress is intended to form a distinct Course of lectures in the degree course; and this was included with a view to broadening the student's outlook and giving him some of that information which is so much needed by the intellectual classes who will have the control of the future political development of India. It was felt that putting this in the first year of the degree course would tend to give the student a lively interest in the subject; and make him realise that he is studying theory largely with the object of learning to understand the disturbing economic conditions of our time and the economic laws with which proposed reforms must accord.

The theory itself is developed as logically as possible, the various subjects being set out in detail, and in the order in which it is recommended they should be taught. During the first year a brief preliminary survey of theory is to be given concurrently with Economic Geography and Social Progress. This acts as a suitable introduction to the full and thorough study of the theory which is undertaken in the second year.

The Intermediate Course is naturally also largely geographical in character, and thorough practice in calculations and in graphic methods is insisted on as an absolute pre-requisite to the understanding of economic theory.

It may be added that the Board of Studies subsequently reduced the course because it was too long to lead to an examination of but two papers, and because there would be difficulty in many Colleges in arranging for teaching of parts of the Course. As now adopted (for the examinations of 1922), the whole section on social progress is omitted, and the practical parts relating to machinery.

SYLLABUS OF PROPOSED INTERMEDIATE COURSE IN ECONOMICS

I. ELEMENTARY COMMERCE

Calculation of percentages, exchanges, interest, discount, capitalization, present value, commission, dividends. An understanding of the balance-sheets of a company and bank; liabilities and assets, receipts and disbursements, profit and loss. The use of cheques, bills of exchange, etc. The nature of a currency note.

II. GRAPHIC METHODS

- (a) Comparative diagrams—Columns, rectangles, and circles.
- (b) Historical diagrams—Curves and lines representing prices, trade, population, and other economic phenomena.

III. ECONOMIC GEOGRAPHY

The study of commercial and industrial geography developed from the following standpoints:—

- (a) How the college, town or city is fed, leading from the sources of the food supply in the villages to the distribution of agricultural products, and the influence of physical characteristics, rainfall, etc., and to the development of a commercial as distinct from a subsistence agriculture.
- (b) How the town or city is clothed and housed, leading to industry, its localization, etc., and to forests and mines or city.
- (c) How the town contributes to the outside world, leading to transportation, both by rail and water, inland and foreign, trade routes, etc.

IV. ELEMENTARY THEORY OF CONSUMPTION AND PRODUCTION

- (a) Consumption. Definitions, Wants, Marginal Utility, Law of Demand. Apportionment of Income.
- (b) Production. Definitions: Land, Labor, Capital. The supply of labor: numbers, efficiency, and reaction of health, social customs, education, etc. The influence of machinery. The relation of the product of labor to land: the law of diminishing returns. The increase of the product of labor by Capital. Fixed and circulating capital.

PROPOSED NEW ECONOMICS COURSE 67

Machinery. The increase of the product of labor by organization. The division of labor. Scale of production.

Localization. Combination of the factors of production.

It is intended that all branches of the course should be taught in a practical manner; and that the study of Production should involve the careful study of at least one cottage industry.

REVISED SYLLABUS OF B. A. COURSE

PART I

[N. B.—The order of the subject-matter is that suggested as most suitable for teaching. The distribution of subjects between Papers I and II is indicated by (I) and (II) respectively prefixed to each section.]

(I) *Elementary Economic Geography*—The Physical features and their geological origin, illustrated by reference to Northern India. Progressive denudation through action of air, sun, rain and frost. Soil erosion. Silt carried in rivers and its deposition. Changes of courses of rivers. Character of soil in each zone of the valley section. Climates of India and their distribution. Distribution of occupations in accordance with physical features and occurrence of raw materials. Relation of density of population and average rental to soil fertility and climate. Rural economy of subsistence farming. Relations of town and country: interchange of products. Towns as commercial and cultural centres.

(I) *Transportation*—By land, rivers, roads, canals, railways. Ocean navigation. Trade Routes. The prin-

capital commodities of commerce. Short and long distance trade. Growth of towns. Absorption of rural industries; complementary growth of commercial farming, and redistribution of crop areas.

PRELIMINARY BRIEF SURVEY OF THEORY

Importance of Economics. Wealth, utility, and value. Laws of diminishing utility and demand. The law of substitution. Standard of living. Relation of an individual's demand to that of a community.

The agents of production. Natural resources. Labor. Capital. Conditions of efficiency and mobility of labor. Division of labor. Production. Self-supporting stage, artisan stage, and factory stage. Substitution of machinery for labor. Business organization. Specialization of the agents of production. Size of business, law of substitution, laws of decreasing and increasing returns. Commercial work. Merchants and speculators.

Markets and competition. Price, or value in exchange, under competition. Prices of fixed stocks. Prices of reproducible things. Equilibrium of supply and demand. Effects of changes in supply price, and of increased and decreased demand. Monopoly prices.

Barter. Money. Coinage. Gresham's law. Credit money and banking. The purchasing power of money. Appreciation and depreciation of money. International trade. The balance of trade and foreign exchanges.

Distribution of wealth. Fertility and situation as causes of rent. Agricultural systems. Interest. Demand for capital and causes of saving. Wages. Earnings of employers (independent labor) and wages of employees under competition. Grades of labor. Differences between wages. Methods of paying wages. Collective bargaining and industrial disputes. Taxation and the problem of incidence. The national income. Summary of causes of the poverty and wealth of nations.

N. B.—During the first year no subject is to be treated more fully than in Chapman's "Elementary Economics" and Moreland's "Introduction to Economics for Indian Students."

SOCIAL PROGRESS

A brief historical outline of the stages of economic development and changes of economic policy. Primitive man; nomadic tribes; extensive cultivation. Growth of population and settlement of the waste or jungle: the emergence of rent. Village industries. Domestic system of commercial industries. Invention of machines and application of water and steam power. (The Industrial Revolution). The factory system. Progress of invention and research, and the consequent reorganizations of industries. Economic effects: small cheap power plants: internal combustion engines (oil and producer gas). Electrical distribution of power. Scientific management. Studies of efficiency and fatigue.

The social classes in a country of self-sufficing economy. Growth of the importance of the trading classes with growth of communications. Social effects of the industrial revolution. Exploitation of child labor and of the poor generally. Change of policy from sumptuary laws and mercantilism to individualistic commercialism (*laissez faire*). Growth of the idea of communal effort for social betterment, illustrated by brief references to the poor law (England), factory acts, (England and India); workmen's compensation and protection from accidents; compulsory education (England and India), and the housing of the working classes acts (England). Growth of the idea of progress by ordered development and by creation of the conditions of a higher standard of life; social insurance against unemployment, disease, and old age; the minimum wage movement; welfare

work for factory operatives: recognition of health and happiness as conditions of efficiency. Change of environment: town planning and the garden city movement. Financial aid by Government for rehousing of the working classes. Brief history of Co-operation: credit societies; Co-operative Stores. Betterment of rural life by improved communications and social institutions. Co-operative purchasing and selling societies.

This section on Social Progress is only intended as a survey of thought and ideals in regard to economic and social changes and policies. The various changes, inventions, reforms and movements mentioned are therefore to be treated briefly and with a view to bringing out the salient features of each and its importance as a cause, instrument, or effect of economic or social progress.

PRACTICAL WORK

(I) *Graphs*. Ordinates and abscissæ; nature and use of graph paper. Plotting of curves of prices and other simple statistics.

(I) *Commercial Arithmetic*. Calculation of percentages, exchanges, interest, discount, present value, commission, dividends. Income and Expenditure Accounts (Cash-book). Debtor and Creditor Accounts (Ledger). Capital and Stock Accounts. Balance-sheets (especially of Merchants, Banks, and Industrial Companies). Measures of length and area; yards, miles, bighas, acres, and square miles.

Calculation of simple examples illustrating index numbers.

(I) *Rural Economics*. The Head of Department will arrange for each student to visit a village in a rural area and to study carefully its economy and social structure. Students should attend the meetings of a

rural co-operative society in this or some other village and examine the working of the society.

(II) *Industries.* Students will be expected to study the local cottage industries by a sufficient number of personal visits to craftsmen such as hand-weaver, blacksmith, potter and *teli*. These may be seen in town or village. Students should study rate of output, quality of product and relation of cost of production to price in these trades. The conditions of the workers should also be studied. Visits of all students should also be arranged to large-scale mills and factories. If there is an agricultural experimental farm within reach it should be visited.

(II) *Use of Machines.* It is recommended that teachers encourage and facilitate the students learning practically how to use the typewriter or how to work some other machine like a lathe, or sewing machine, with a view to the student gaining that practical experience necessary for him thoroughly to understand the various principles applicable to the use of machinery. The more important principles are:—

(1) Dependence of quantity and quality of the work on the skill of the operative and efficiency of the machine;

(2) The relation of the rate of production of value ($\text{price} \times \text{quantity}$) to rate of operation, *e.g.*, falling off of quality with increased speeds;

(3) Effects of wear and tear, and need of repairs and allowance for depreciation.

PART II

(I) *Introductory.* Subject-matter of the Science. Its divisions and their interdependence.

Economics a part of Sociology. Economics takes as premises the conclusions of the physical and biological sciences, also of psychology. Its conclusions should be

developed with constant reference to those of other branches of sociology, such as the study of the evolution of religious and political institutions, moral ideas, and social customs.

(I) *Method*. Observation, induction, deduction, and verification, as applied in economic science (as in *Essays on Economics*, pp. 6-11). Illustrative schedules and corresponding curves (as in Carver, *Distribution of Wealth*, p. 82). Examples of graphic treatment of theory (as *Essays on Economics*, pp. 47 and 76). Use of graph paper, columnar diagrams, statistical charts and curves. Law of constancy of large numbers (Bowley, p. 264). Necessity of historical study. Comparison of present conditions with former conditions and other countries. Theory always true, applications of it differ in different conditions.

(I) *Simple Definitions* of Wealth, Labor, Exchange, Money, Price. Indian illustrations to be freely used.

(I) *Consumption*. Wants. Origin of new wants and interdependence of activities. Definitions of utility; total and marginal utility. Law of diminishing utility. Gain of utility by exchange. Dependence of utility on time and place.

(I) *Law of Demand*. Demand schedules and curves. Elasticity of demand. Consumer's surplus with Indian illustrations. Fashions and customs with their effect on demand in different parts of India as compared with Europe. Scale of wants and apportionment of incomes of various classes of Indians. Family Budgets. Growing wealth of India. Its influence on demand.

(I) *Exchange*. Theory of barter. Conditions of gain of utility by exchange. Definition of a market, its

nature as to place, time and persons. Extent of the market for different commodities. Indian village markets. Effects of cheap transportation and storage.

(I) *Money*. Functions. Materials and their necessary qualities. Kinds of metallic money: standard and token. Minting. Monometallic standard and bimetallic standard (N.B. omit the controversy). Paper currency. Gresham's Law. Relation of circulation to prices. Metallic and paper currency of India. History since 1870. Paper Currency Reserve. Profits of coinage.

(I) *Banking*. The Business of Banks, and the use of cheques. Clearing houses of London, Calcutta and Bombay (as in Memorandum on Banking of the Director of Statistics). Creation of credit. Indian Banking. Organization of credit in India. Need of connecting the various money markets.

(I) *Prices in organised Markets*. Factory, wholesale and retail prices. Price fluctuations. Their relation to the inflation of credit. Index numbers. Effects of quick communication and the publication of statistics (of crops, etc.) Influence of speculation; anticipation and future bargains. Dealers' and speculators' methods. Distinction between gambling and speculation.

(I) *Mechanism of Foreign Exchanges*. Bills of Exchange. Mint Par. Exchange quotations. The Exchange Banks. Gold Standard Reserve. Council Bills and "Reverse Councils."

(II) *Production*. The factors and agents of production; grouped under various heads—land, labor, capital, management, and enterprise (risk-taking). Combination of the factors in varying proportions. Law of dimini-

shing returns (in terms of produce). Laws of increasing expenses, and of increasing real costs. Principle of substitution. Illustrations by comparing new and old methods in Indian industries, and by comparing proportions of labor and capital employed in the same industry in Europe or America with India.

(II) *Extractive* (or primary) and *Manufacturing* (or secondary) *Industries*. The agricultural industries of India; distribution of the principal crops. Forestry. Mining industries for coal, iron, gold, manganese, mica, lead, etc. Fisheries, sea and river. Principal manufacturing industries; cotton, jute, iron, glass, sugar, leather, paper, pottery, etc. Dependence upon transportation and storage.

(II) *Land*. Its qualities as space. Use of natural resources. Fertility. Sources of power. Climate. Natural defences. Importance of location near waterways, roads, and railways. Growth of towns in India.

(II) *Agriculture*. Various kinds of organisation. Different land tenures. Zamindari and Ryotwari systems. Present conditions. English system. Improved methods of cultivation applicable in India: rotation, seed selection, new crops, deep ploughing, fertilizers. Permanent improvements of land: wells, irrigation, drainage, building, fencing, roads. Redistribution of holdings. The improvement of cattle. Silage. Dairies and milk supply.

(II) *Labor*. Distinctive qualities. Skilled and unskilled. Division of labor, between trades, between the agents of production, and between processes within trades. Its dependence on exchange. Conditions of labor in output and quality and numerical comparisons.

with efficiency of labor in Europe. Influence of caste, social customs, and heredity.

(II) *Capital*. Fixed and circulating capital. Economic characteristics of machinery. Deterioration of capital goods by wear and weather. Depreciation of value; obsolescence. Sinking Funds. Repairs. Insurance against sudden loss. Conditions of accumulation of Capital.

(II) *Large and small scale Production*. Advantages and limitations of each. Relation to division of labor, machinery and plant, extent of the market, and cost of transportation. Supply schedules and long period cost of production curves. Laws of increasing returns and of decreasing costs. Constant returns and constant costs. Decreasing costs due to inventions and to specialization in the use of land, labor, materials, and of management and enterprise (*i.e.*, the factors of production). Types of organisation of the agents of production; end-man businesses, large firms, companies, trusts; co-operative, municipal, and state undertakings. Localisation of industry, with Indian and English examples. Utilization of bye-products, with Indian examples (present and prospective).

(II) *Balancing of Supply and Demand*. Temporary equilibrium of supply and demand. Short and long periods. Equilibrium of normal demand and supply. Equilibrium of marginal demand-price with marginal supply-price in short periods, and with marginal expenses of production in moderately long periods. Marginal cost of production in very long periods.

(II) *Distribution*. Balance of demand for and supply of the factors of production. Interdependence of the demand for the factors of production, owing to the principle of substitution, and of the supply of the factors.

Equalisation of their marginal productivity as between the individual businesses of a single industry, between different industries owing to the operation of the law of substitution according to the length of the period considered. Dependence of substitutions upon the mobility of the factors of production. Effects of introducing new methods: *e.g.*, new processes, machinery, etc.

(II) *Rent*. Gross and net rent. Economic rent. Various forces determining it. Fertility and situations. The law of rent. Rent does not determine price. The extensive and intensive margins of cultivation. Expansion and contraction of cultivation. Effects of improvements in agriculture and in transportation on rents. Calculation of land values by capitalizing the rent. Unearned increments and speculation in land values. Relation of rent to land tenures; results of taking a share of the gross produce, a fixed cash rent, or a share of the net produce. The Land Revenue in India.

(II) *Interest*. Demand for and supply of capital. Differences between short and long term investments. The prevailing rate of interest dependent upon the amount of capital set free for fresh investment in the period considered and on the extent to which it is mobilized. Mobility of capital between localities, between industries, and from less to more specialised forms of capital. Gross and net interest. Safe and risky investments in India. Tendency to equal returns on equally risky investments. The rate of return and the rate of interest.

(II) *Quasi-Rent*. Differences between the actual return on fixed capital (*i.e.*, quasi-rent) and the continuing cost of the fixed capital (*i.e.*, interest). How they tend to become equal.

Wages and the Population Question. Birth and

death rates. Census returns. Positive checks: war, starvation, and disease. Preventive checks: vice and moral restraint. Indian famines and relief measures. Health and sanitation. Loss of laborers' time from sickness. Early marriage and the joint-family. The standard of living, and effects of education. Peculiar features of the question in India. General conditions affecting demand for and supply of labor. Long period equilibrium between marginal net product at a given stage of the industrial arts and cost of maintenance of population at a given standard of living. Real and nominal wages. Apparent differences in wages. Mobility of labor between localities and between occupations. Vertical mobility. Tendency to equal wages for equal work. Different ways of paying wages and their effects in stimulating the laborer to do good work.

Effects of Trade Unions on wages, and on general conditions of labor and life. Provident, trade, and political activities. Mechanism of Collective Bargaining. Strikes and Arbitration.

(II) *Profits.* Normal Profits, as the reward of management and risk-taking (the fair remuneration of the enterpriser), and Surplus Profits as the result of special advantages in time and place, and legal rights; *e.g.*, sudden changes, taking unusual risks, monopolies, and unfair activities. Losses are negative surplus profits, and cannot be permanent. Profits, if based on a permanent advantage, may be treated as rent and capitalized.

(II) *Monopolies.* Definitions of sellers' monopoly and buyers' monopoly. Legal monopoly. Natural monopoly in its two senses: (1) due to natural resources, (2) due to economic tendencies (*e.g.*, public utility services). Industrial monopoly. Fiscal monopoly. The theory of maximum monopoly revenue (with simple diagrams). Determination of monopoly

price in actual practice. Idea of total benefit (without diagrams). Problems raised by monopolistic combinations; problems of unfair competition and price discriminations; problems of Government control; taxation by means of fiscal monopoly. Effect of taxing monopolies at a fixed amount and in proportion to output.

(II) *International Trade*. Brief statement of conditions under which international trade arises, how it differs from internal trade, and the importance of each. Theory of free trade, and the conditions under which protection is desirable.

(II) *Co-operation*. Agricultural and urban; the theory of organisation and working of credit, distributive, and purchasing societies. Co-operative production: its advantages and its weaknesses.

(II) *Taxation*. Canons of Taxation (as in Bastable) illustrated by Indian taxes. Direct and indirect taxation. The incidence of the principal Indian taxes. The Indian tax system. Provincial and municipal taxation: necessity for separate sources of revenue.

(II) *Summary*. The National Income. Causes of national wealth and progress.

Note on the Use of Machines

It may be an assistance to teachers of economics to print here as an Addendum to the proposed syllabus some suggestions as to how the economic principles applying to the use of machinery may easily be demonstrated to students. It would seem that the machines which can be most easily obtained and used are the following:—

- (1) A Singer Sewing machine.
- (2) A hand corn-grinder which will produce *atta*.
- (3) A typewriter.

The principles which can be demonstrated on each may be enumerated separately.

The sewing machine can be used to hem dusters. A length of 30 yards or a full piece of common cloth of 40 yards being purchased for the purpose. The cutting up of the cloth can be made to illustrate the organization of work, the work being divided between three or four students each being given his particular task, and the cutting up of the whole piece into squares being timed to take, say, not more than two minutes. In the actual operation of the sewing machine the following principles can be demonstrated by carefully timing with the second-hand of a watch the length of time taken to hem one side of the duster, and observing the quality of the work turned out:—

(1) The falling off of quality with increased speed of the work, and the discovery of the speed of maximum advantage, taking the money value of the work into consideration.

(2) The dependence of the quality and quantity of the work on the skill of the operator. Different students will be found to do the work with the different degrees of ability. A professional *darzi* may be called in for an hour or so and be made to hem a few dusters, his work being timed and compared with that of the students as regards quality.

(3) The division of labor can be well illustrated by ascertaining the increased rate of working which arises from having one student to turn the handle whilst another is guiding the cloth, instead of one man doing both operations. It is assumed that a hand machine, not a treadle machine, is used.

(4) The relative efficiency of different machines can be illustrated by having two sewing machines of different kinds or states of repair. It may be possible to hire or borrow a very old fashioned machine

or one which is worn out and works badly, which may be compared with a new and modern sewing machine.

(5) If two such machines are available, it may be easy to demonstrate the effects of wear and tear and the need of taking into account a recurring charge for repairs and an allowance for depreciation. Those students who own bicycles can appreciate these principles very correctly by reference to their own experience in replacement of tyres, etc., and the gradual wearing out of the whole bicycle.

The corn grinder may be made to illustrate a number of principles. The best plan is to buy a maund of wheat and make experiments at grinding it into *atà*. The use of a scale or weighing machine to weigh the *atà* produced is desirable; but if that cannot be procured, measures holding two or three seers of *atà* can easily be purchased in the bazar. The main principles to be studied are:—

- (1) Securing the maximum output,
- (2) Necessity of having raw material in the right condition,
- (3) Use of power.

(1) The rate of output will be found to depend both upon the care devoted to the continuous feeding of the raw material to the machine, and on the amount of power applied. A lengthy experiment may be made, the rate of turning the handle in revolutions per minute being measured and the output obtained in a given time, say ten minutes, being carefully weighed. If this be done for six or seven different speeds, varying from quite slow up to the highest speed that it is possible to turn the handle, a useful graph may be plotted. Assuming the power absorbed to be proportional to the speed of turning the handle, it will be observed probably that the

speed of maximum output is less than the maximum speed at which the grinder can be driven. In some cases this maximum cannot be passed by hand turning.

(2) As regards the condition of the raw material, it should be observed that to obtain good *atta* the wheat must be hard and dry and also clean. Note that if the wheat contains stones or bits or metal these are apt to spoil the grinding plates, unless the machine be provided with plates mounted on springs which give way before any very hard substance so that the plates remain undamaged. The necessity for the wheat being dry may easily be demonstrated by wrapping up some of the wheat in a wet cloth a few hours before the experiment. When taken out of the cloth it may be allowed to dry for a few minutes so that it does not feel wet. If then put through the grinder it will be found to give very unsatisfactory results and may clog the plates. In case the wheat should be very wet, it is recommended that this trial be made after the other experiments lest it clog the plates to such an extent that they have to be taken out of the machine and cleaned in water with a brush.

(3) The use of power can be studied. Notice first that turning the handle is unskilled work, and that any coolie can quickly learn it. Some men are stronger than others and can turn faster than others and keep it up for a longer time than others. If electric current be available and a small electric motor, or an oil engine, an arrangement may be made to take off the crank and handle for turning by hand and substitute a pulley wheel for driving with a belt. If this cannot be arranged in the University or College, itself, some workshop can probably be found in the town where the machine could be fitted up and the experiment tried for a charge of a few rupees only.

It will be highly instructive to obtain an ordinary stone grinder or *jata* as used in the home of the people of the locality and compare its efficiency with that of the steel grinding machines.

The typewriter may be used to illustrate certain principles in relation to machinery. A good modern machine should be borrowed for the purpose. The typewriter is particularly good for illustrating labor-saving devices; as, for example, the handle for doing the operations of shifting the carriage back to the right-hand side and turning to a new line at the same time, with the automatic adjustment for spacing one, two or three lines. On many machines there can be found such devices as the tabulating spaces, and the back-spacing key. A typewriter can also be used to illustrate the rate of output and quality of work. The output may be measured either in pages of a standard size and number of lines, or in folios of 72 words, or per thousand words. The student can be asked to calculate his earnings in copying literary matter if paid at the rate of As. 8 per thousand words, or any other rate. The best quality work should not contain more than three errors per thousand words and second quality work up to ten errors per thousand words and so on.

The above suggestions for utilising simple machines in demonstration of the principles of machinery will serve to indicate the lines on which further experiments may be made. There is room for considerable ingenuity in studying the properties of machinery in an experimental manner; and it is most important that students should be required to take part in these experiments themselves. When they thoroughly understand a simple machine they will realise that larger and more complicated machinery obeys the same economic laws. Exactly the same principles could be

illustrated on the machines to be found in any factory. If it should be possible to arrange for experiments to be made in a cotton ginning factory, a large flour mill, or in any cotton spinning mill, this would be highly instructive to students; but such large-scale experiments must absorb considerable time as the machinery is difficult to understand; and usually it will not be easy to find a proprietor who would allow students to handle his machinery.

A STUDY OF THE INDIAN FOOD PROBLEM

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Introduction

The object of this paper is to make an impartial study of the food problem of this country with a view to finding out its total requirements of foodgrains and the total supply of the same from the statistics that are at present available. In 1870 Dr. Dadabhai Naoroji, in his book 'Poverty and Unbritish Rule in India' tried to show that the masses of Indian population were existing at that time in a condition verging on starvation. Sir W. Hunter in his book 'England's Work in India' observed that a fifth of the population (or 40 millions) went through life on insufficient food. In 1901 Mr. William Digby in his book 'Prosperous British India—a revelation' reached much the same conclusion as Dr. Dadabhai Naoroji as to the starving condition of the Indian masses. More than 18 years have passed since the publication of the last named book, and the condition of the Indian people has undoubtedly changed a great deal; but till lately no attempt has been made to make a thorough and exhaustive study of this problem in the light of information which is now available.

Divergent views are held regarding the condition of the Indian masses. Many Indian thinkers, whose opinion is entitled to much weight, hold that the condition of the Indian masses is going from bad to worse, the majority of them being underfed with the result that their physical condition is deteriorating; while others, who are equally important personages, hold just the opposite view. Food being a vital necessity of life, the importance of the problem of finding out the extent of semistarvation in India at the present time, cannot be overestimated; and it is high time that some impartial and exhaustive inquiry should soon be undertaken. Recently Rai Bahadur Ganga Ram C.I.E.; M.V.O.; late of the P. W. D. (Irrigation Branch), a bold and successful farmer of the Punjab, has attempted to tackle this problem very ingeniously in the first chapter of his interesting and useful little book 'The Agricultural Problems of India'; and after a careful calculation he comes to the conclusion that 77 million tons of food-grains were required in India during the year 1912-13, whilst the harvests of that year produced 76·36 million tons. Although the Rai Bahadur has opened up an important line of statistical inquiry, I strongly feel that the subject has not been dealt with as exhaustively as it ought to be to enable us to arrive at any satisfactory conclusion regarding this all important question. I, therefore, venture to deal, in the following few pages, with the same problem practically on similar lines.

The extent of the Inquiry

At the outset it must be made clear that I think it necessary to confine the inquiry to British India only, because agricultural statistics for all native states are not available, and the agency for collection of statistics in most of those native states for which agricultural statistics are available is not so trustworthy as that in British India.

The nature of the Inquiry

The inquiry naturally falls under two heads. Under the first we have to consider the total requirements of foodgrains by adding up (a) the quantity of foodgrains required by the whole population assuming them to have sufficient food to maintain them in health and strength; (b) the quantity consumed by cattle; and (c) the quantity required for seed. Under the second we have to consider the total supply of foodgrains by first finding out the total outturn of all the foodgrains and pulses, after making due allowance for wastage; and then adding the excess of imports over exports of foodgrains from and to Native States; and subtracting the excess of exports over imports to and from foreign countries.

The period of the Inquiry

It is a well known fact that harvests in India fluctuate much from year to year, and that stocks of grain are commonly carried over from one year to another; and so, in order to arrive at a trustworthy result, the inquiry must be extended over a sufficiently long period so that it may include ordinary, good and bad years from the agricultural point of view. Therefore, before entering the first part of the inquiry, it is necessary to decide the period of inquiry and to ascertain the agricultural condition of each year. In my opinion, seven years time is a sufficiently long period to give us a fairly good average, and I have decided to confine the inquiry to the period commencing from the year 1911-12 and ending with the year 1917-18.

Agricultural condition of different years of the Period

Now the next step is to ascertain the agricultural condition of all these years. During 1911-12

winter rains had been favorable and with the exception of a few afflicted tracts of Gujerat and Kathiawar, the year viewed as a whole was an ordinary one. In 1912-13 there was a good monsoon rainfall, but there was a slight failure of winter rains particularly in Northern India, and so the year as a whole was an ordinary one. In 1913-14 the monsoon, after the middle of July, was irregular and the rains in the U.P. and C.I. ceased in early September. In parts of Bengal, Bihar and Orissa, and Madras excessive rains resulted in heavy floods. The winter rains were also deficient in the U.P., C.I., and Rajputana and famine conditions were established in parts of those provinces, and therefore from an agricultural point of view it was a bad year. In 1914-15 the monsoon was favorable for the Autumn crops except in parts of Northern and Western India. The winter rice crop was adversely affected in some parts, and the conditions for wheat were favorable except in Bihar and Orissa and Bengal. Rain and hail caused some damage to the crop, but on the whole the spring crop was good, and so the year may be taken to be an ordinary one. In 1915-16 weather conditions were not altogether favorable owing to a weak and irregular monsoon and inadequate and untimely winter rains particularly in Northern and Western India. There were serious and disastrous floods in Assam and in parts of Bengal and the U.P., and so it was a slightly bad year. In 1916-17 the monsoon was remarkably vigorous and gave abundant rainfall throughout the country. It arrived early and continued late, the distribution of rain being remarkably uniform, and so this year was an exceptionally good one. In 1917-18 the south-west monsoon was exceptionally bountiful and prolonged, but winter rains were defective in the north and centre of India and speaking generally the

copious south-west monsoon rendered this deficiency far less serious than otherwise would have been the case, and so this year was an ordinary one. So we see that in the period under inquiry we had four ordinary years, two bad years and one good year.

Quantity of Foodgrains required per head per day

Now I turn to the first part of the inquiry. First of all, we have to find the quantity of foodgrains required by the whole population of British India assuming them to have sufficient food to maintain them in health and strength. For this purpose we have to determine the quantity of foodgrains and pulses daily required by ordinary men to maintain them in health and strength under different age groups. Now the latest famine codes of the U.P., the Punjab, Bengal, Bombay and Madras give the following wage scale, which is worked out on the principle that the famine wage should be the lowest amount sufficient to maintain an ordinary man in proper health.

<i>Workers :—</i>			<i>In chhataks</i>	
Diggers	18
Carriers	14
Working children	10
<i>Dependents ;—</i>				
Adult (Males)	12
Adult (Females)	10
Children (10-14)	8
Children (7-10)	6
Children under 7	4
Children in arms, to the mothers	3

It is further mentioned in the U. P. the Punjab and Bombay codes that if cooked food is given, the price of the ration, including the allowance of salt, oil, condiment, and fuel, etc., should equal the price of the

grain allowance prescribed in the above table which includes the margin for these articles also; and the Bengal code says that if cooked food is given the allowance for grain should be reduced in the case of workers and adult dependents by two *chhataks*, and in the case of children from 14 to 7 by one *chhatak*. The reduction may be taken as representing the amount of pulse, salt, ghee, condiment and vegetables which should form part of the ration. So the rations of food-grains for cooked food, excluding pulse, given in addition to that of vegetables and other articles according to the above mentioned famine codes would stand as follows:—

<i>Workers:—</i>			<i>Chhataks</i>
Diggers	...	...	16
Carriers	...	...	12
Working children	...	...	8
<i>Dependents:—</i>			
Adult men	...	...	10
„ women	...	...	8
Children 14—10	...	...	7
„ 10—7	...	...	5
„ under 7	...	...	4
„ in arms (to the mother)	...	...	3

After making an allowance for pulse of one *chhatak* per day for adults and half a *chhatak* per day for children above 10 and turning *chhataks* into ounces at the rate of 2.057 ounces for one *chhatak*, the above may be represented in a slightly different manner as follows:—

QUANTITY OF FOOD-GRAINS EXCLUDING VEGETABLE
REQUIRED PER HEAD PER DAY

Age	ozs.	
0 to 1	6.2	(In arms) to the mother
1 to 2	6.2	„ „ „
2 to 5	8.2	(under 7)
12		

Age		ozs.	
5 to 10	...	10.3	(from 7 to 10)
10 to 15	... 15.4 to 17.5		(from 10 to 14 and working children)
15 to 50	(males : workers)	35.0	(Diggers)
„	(males : non-workers)	22.6	(Dependent adult-men)
„	(females : workers)	26.7	(Carriers)
„	(females : non-workers)	18.5	(Dependent adult fe- males)

The Central Provinces Famine Code of 1896 gives the following full ration of food-grains and pulses for able bodied persons :—

	FOR A MAN	FOR A WOMAN
	ozs.	ozs.
Flour of common grain used in country or clean rice.	24	20
Pulses	4	4
Salt	$\frac{1}{2}$	$\frac{1}{2}$
Ghee or Oil	1	$\frac{1}{2}$
Condiments and Vegetables	1	1

For children $\frac{3}{4}$, $\frac{1}{2}$ and $\frac{1}{4}$ according to age and requirements.

The above may be represented as follows :—

QUANTITY OF FOOD-GRAINS AND PULSES EXCLUDING
VEGETABLE REQUIRED PER HEAD PER DAY

Age		ozs.
0 to 1	... ..	...
1 to 2	... ..	...
2 to 5	... ..	7
5 to 10	... ..	14
10 to 15	... ..	21
15 to 50 (males)	... ..	28
15 to 50 (females)	... ..	24

In Central Provinces Jail Manual it is expressly stated that all native prisoners shall have three meals a day—in the early morning, at midday, and in the evening—and the diet scale shall be as follows:—

		For laboring male convicts	For non-laboring male convict, male prisoners undergoing simple impri- sonment and female pri- soners of all classes
Early morning:—			
	<i>Chhataks</i>		<i>Chhataks</i>
Rice	2	...	1½
or			
Wheat or Jawar flour ...	1½	...	1
Molasses	½	...	„
Salt	1/16	...	„
Midday and Evening:—			
Rice	11	...	9
or			
Wheat Flour	10	...	8
or			
Jawar Flour	11	...	9
or			
Rice and flour	11	...	9
Dal	3	...	2
Vegetables	3	...	3
Oil	¼	...	¼
Salt	1/16	...	¼
Condiments	1/8	...	1/8

From the above we find that the quantity of food-grains and pulses given, in addition to vegetable and other articles, to prisoners in the Jails of Central Provinces works out as follows:—

Adult males—workers	80.8 ounces [for laboring male convicts]
„ „ non-workers	22.6 ounces [for non-laboring male convicts]
„ females	22.6 ounces [for female prisoners of all classes]

1 Not included in the diet scale of other two meals.

2 Included in the diet scale of other two meals.

According to the Jail Manual of the U. P. all Indian adult male prisoners sentenced to rigorous imprisonment, and all adult Indian male prisoners sentenced to simple imprisonment who elect to labor, get their food in jails according to the following diet scale :—

<i>Chhataks</i>			
Cereal pulse combination	...	...	14
<i>Dal</i>	...	...	1
Vegetable	...	...	3
Oil	...	...	$\frac{4}{25}$
One Chili			
<i>Grains</i>			
Salt	...	...	150
<i>Chhataks</i>			
Coal [Charcoal]	...	...	2 to 3

The dietary of all adult Indian female prisoners sentenced to rigorous imprisonment, and all adult female prisoners sentenced to simple imprisonment who elect to labor, and all juvenile prisoners arrived at puberty, is regulated according to the following diet scale :—

<i>Chhataks</i>			
Cereal combination	...	...	12
<i>Dal</i>	...	...	1
Others as above			

And the diet scale of all Indian adult prisoners sentenced to simple imprisonment who do not elect to labor, all juvenile prisoners not arrived at puberty, and all undertrial prisoners, is as follows :—

<i>Chhataks</i>			
Cereal combination	...	...	10
<i>Dal</i>	...	...	1
Others as above			

It is also stated in the same Manual that "children under two confined along with their mothers should have a diet allowance as under:—

(a) to nursing mothers two *chhataks* of wheat *attā* and half a *chhatak* of ghee in excess of the ordinary laboring rations ;

(b) to children between 12 and 18 months six *chhataks* of milk, two *chhataks* of rice, and half a *chhatak* of *dal* ;

(c) to children between 18 and 24 months four *chhataks* of milk, four *chhataks* of rice, and half a *chhatak* of *dal*."

From the above it can be seen that the quantity of food grains and pulses given per day to Indian prisoners, in addition to vegetables and other articles, in the jails of the U. P. is as follows:—

Age			ozs.
0 to 1		to the mother ...	2.1
1 to 2	...	...	5.1 to 9.3
2 to 5	...	...	(a)
5 to 10	...	...	(a)
10 to 15	...	...	22.6
15 to 50	males:—workers	...	30.8
"	" males:—non-workers	...	22.6
"	" females:—workers	...	26.7
"	" females:—non-workers	...	22.6
Above 50	...	...	22.6

The hospital full diet scale as given in the Jail Manual of C. P. is as follows:—

Morning:—			<i>Chhataks</i>
Suji (flour)	...	...	1
Milk	...	...	2
Sugar	...	...	$\frac{1}{4}$
Midday and evening:—			
Wheat flour	...	...	10
or Rice	...	...	11

(a) Information not available.

or Wheat and Rice	...	...	11
Dal ...	...	...	3
Vegetables	...	...	3
Oil ...	...	...	$\frac{1}{4}$
Salt ...	...	...	$\frac{5}{16}$
Condiments	...	...	$\frac{1}{8}$

From the above we find that for a full diet in hospitals of C. P. 30.8 ounces of food grains and pulses are given in addition to vegetables and other articles.

In *Land and Labor of a Deccan Village* by Dr. Harold Mann on page 134 we find that the following ration for a family of five persons composed of one man, two women, and two children was considered as the minimum by the people themselves.

Material	Quantity Required per annum		
Bajri	2304	lbs
Rice	48	„
Pulses	80	„
Wheat	48	„
			<hr/>
			2480 lbs
			<hr/>

If we count a woman as requiring four-fifths, a child three-fifths the food of a man, as Dr. Harold Mann has done, we find that the above rations come to 28.6 ounces per day for an adult male, 22.9 ounces per day for an adult female, and 17.2 ounces per day for a child.

All these various figures have been placed side by side in the table opposite; and assuming the number of adult male workers to be three-fourths of the adult male population and of adult female workers to be one-third of the adult female population, I have calculated the average standard from all these figures. It is given in column 8 of the table.

STATEMENT SHOWING THE QUANTITY OF FOOD-GRAINS AND PULSES REQUIRED BY ABLE BODIED PERSONS PER HEAD PER DAY (IN ADDITION TO VEGETABLES AND OTHER ARTICLES) TO MAINTAIN THEM IN HEALTH AND STRENGTH

Age	1	2	3	4	5	6	7	8	9	10
		Ration of food-grains and pulses for cooked food from the U.P., Punjab, Bombay Bengal and Madras famine codes	Full ration from C.P. famine code of 1896	Jail ration from C. P. Jail manual	Jail ration from U. P. Jail manual	Hospital full diet ration from C. P. Jail manual	Calculated from figures given in Dr. H. Mann's book	Average of columns 2 to 7	Standard adopted for the inquiry	Rai Bahadur Gangai Ram's standard ¹
0 to 1
1 to 2	...	6.2 to the mother	...	...	2.1 to the mother	...	...	4.1	Nil	1
2 to 5	...	6.2	...	...	5.1 to 9.3	...	...	6.9	5	2
5 to 10	...	8.2	7	...	...	...	...	7.6	8	3 to 5
10 to 15	...	10.3	14	...	...	...	...	13.8	12	7
15 to 50	...	15.4 to 17.5	21	...	22.6	...	17.2	18.7	16	9
(Males :—Workers)		35.0	28	30.8	30.8	30.8	28.6	29.8	28	25
(Males :—Nonworkers)		22.6	22.6	22.6	22.6	30.8	28.6	23.6	24	17
(Females :—Workers)		26.7	24	22.6	26.7	30.8	22.9	23.6	24	17
(Females :—Nonworkers)		18.5	...	22.6	22.6	...	...	22.6	20	13
Above 50	22.6	...	...	22.6	20	13

¹ These figures include an addition of one ounce per head per day which represents an allowance made by him for confectionaries, etc.

After taking into consideration the population at different age-groups, the weighted average of this average standard for the whole population comes to 20.8 ounces per head per day. Now we have to take account of the fact that a part of the requirements of food-grains and pulses, in the case of non-vegetarians, is met by the consumption of meat and fish. It is practically impossible to ascertain the quantity of meat and fish consumed in British India during one year and so in the absence of any definite information, I think it best to make due allowance for them by adopting a standard of inquiry which may be less than the average standard calculated above. To make proper allowance for the consumption of meat and fish, if we assume that roughly one half of the population, on an average, takes as much meat and/or fish as to reduce their requirements of food-grains by one-eighth during one year, we will have to reduce the average standard by one-sixteenth. After careful consideration I have decided to adopt the following standard:—

QUANTITY OF FOOD-GRAINS AND PULSES REQUIRED IN
ADDITION TO VEGETABLES AND OTHER ARTICLES
PER HEAD PER DAY

Age				ozs.
0 to 1	...	...	...	<i>Nil</i>
1 to 2	...	...	to the mother	5
2 to 5	...	...	...	8
5 to 10	...	...	...	12
10 to 15	...	...	...	16
15 to 50 (Males)	...	...	...	28
15 to 50 (Females)	...	...	...	24
Above 50	...	...	...	20

The weighted average of the above standard, taking into consideration the population at various age groups, comes to 1.95 ounces per head per day for the whole population. It will be seen that this quantity is 6.25

per cent less than that calculated from the average standard and I think that this reduction of one-sixteenth in the weighted average for the whole population may be taken to represent the consumption of meat and fish fairly well. In the above table I have also given the standard adopted by Rai Bahadur Ganga Ram and from the above discussion it would be quite apparent that he adopted as his standard an underestimate of the requirements.

*Population of British India in 1911 according
to Age Groups*

After deciding the rations of food-grains and pulses we have to find out the population of British India at different age groups. In Second Part of Volume I of the Census Report for 1911 the figures for different provinces are given and they are added up and given in the following table. After making a slight allowance for the population whose ages were not recorded in those returns we get the population of British India in 1911 according to age groups as given in column 3 below.

Age	Population as given in the census report	Population in 1911 (after making allowance for those whose ages were not recorded)
1	2	3
	Thousands	Millions
0 to 1	7.918	8.0
1 to 2	8.964	4.0
2 to 5	21.182	21.2
5 to 10	34.216	34.5
10 to 15	26.741	27.0
15 to 50 (males)	121.526	61.0
15 to 50 (females)		60.6
Above 50	27.426	28.0

Total quantity of food-grains required by the whole population of British India.

With the figures of population at different age groups before us and the standard of food-grains finally decided upon it is very easy to find out the total quantity of food grains and pulses required by the whole population of British India in 1911 and it is calculated in the following table:—

Age	Population in 1911 (in millions)	Quantity of food-grains required per head per day	Quantity of food-grains required by the whole population per day
1	2	3	4
0 to 1	8.0	ozs.	tons
1 to 2	4.0	Nil.	Nil
2 to 5	21.2	5	558.0
5 to 10	34.5	8	4732.1
10 to 15	27.0	12	11551.3
15 to 50 (Males)	61.0	16	12053.6
15 to 50 (Females)	60.6	28	47656.3
Above 50	28.0	24	40580.4
		22	15625.0
		Total quantity per day ...	132756.7 tons.
		Total quantity per annum ...	48.46 million tons

So we find that the total quantity required in 1911-12 amounted to 48.46 million tons. Now I proceed to estimate the quantity required during different years of the period. For this purpose it is necessary for us to know the estimated population of British India during these years. The method that is generally adopted for estimating the population in the intercensal period is very simple. It is based on the assumption that the same rate of increase holds good as in previous intercensal period. The annual rate of increase of population from previous census figures is estimated in the following way. If r represents the

annual rate of increase per unit and P_1 the population at the last census and P the population at the census previous to the last one then

$$P_1 = P (1 + r)^{10}$$

If we know P and P_1 we can easily calculate the value of r from the above equation. The population of British India in 1891, 1901 and 1911 was as follows:—

		<i>Millions</i>
1891	...	221.2
1901	...	231.6
1911	...	244.3

The rate of increase during 1891-1901 is given by the equation

$$231.6 = 221.2 (1 + r)^{10}$$

whence $r = 0.00463$ or 0.463 per cent per annum. Similarly the annual rate of increase during 1901-11 calculated in similar manner gives $r = 0.00535$ or 0.535 per cent per annum. Taking average of these two we get 0.499 per cent. Therefore for estimating the population in intercensal period 1911-20 I assume that the annual rate of compound increase of population was 0.5 per cent. If we further assume that the rate of increase of population in different age groups was uniform and equal to that of the increase of population as a whole, 0.5 per cent annual compound increase of population will cause a corresponding 0.5 per cent annual compound increase in the quantity of food-grains required by the whole population. On the above basis the quantity of food-grains and pulses required by the whole population of British India to maintain them in health and strength during different years, works out as follows:—

			<i>Millions of tons</i>
1911-12	...	...	48.46
1912-13	...	...	48.70
1913-14	...	...	48.94

			Millions of tons
1914-15	...	...	49.18
1915-16	...	...	49.43
1916-17	...	...	49.68
1917-18	...	...	49.93

Quantity of food-grains consumed by Cattle

The next step is to find out the total quantity of food-grains consumed by cattle. Rai Bahadur Ganga Ram has assumed the following quantity of cereals as given to one animal per day.

Bulls and Bullocks	All	...	@ 1 lb.
Cows	...	...	$\frac{1}{2}$ of total „ 2 lbs.
Cow-buffaloes	...	...	$\frac{1}{2}$ of total „ 3 „
Horses and Ponies	All	...	„ 3 „
Mules	...	All	... „ 2 „

Although the quantity that is actually given by many cultivators to their bullocks is much greater than the average adopted by the Rai Bahadur, at any given time there must be a sufficiently large number of bulls and bullocks who must be getting no food grains at all, and so I consider that the quantity of one pound per bullock per day represents a fairly good average. In the case of cows and cow-buffaloes, when they give milk, they are generally given oil-cakes and cotton seeds in addition to food-grains and pulses, and so the average of two pounds and three pounds of food-grains and pulses respectively seems to be a somewhat high one. I consider that one pound and two pounds in the case of those cows and cow-buffaloes respectively who give milk, will represent a fair average and if we err at all it will be on the side of under-estimation. Horses and ponies do receive everywhere food-grains and pulses and an average of three pounds per animal is in no case a high one. Mules generally do not get food-grains regularly and so I have thought it necessary to make

no definite allowance for them here. The standard that I wish to adopt finally stands as follows:—

Bulls and Bullocks	All	@ 1 lb. per day
Cows	... $\frac{1}{2}$ of total	@ 1 lb. „ „
Cow-buffaloes	„	@ 2 lbs „ „
Horses and Ponies	All	@ 3 lbs „ „
Mules	... ..	Nil

The number of these animals during different years is easily known from Agricultural Statistics of India Vol. I and the amount of food-grains consumed by animals during 1911-12 is worked out in the following table:—

Kind of animal	Quantity of food grains assumed to be given per day per animal. Rai Bahadur Ganga Ram's Standard	Quantity of food grains per day per animal (adopted for the inquiry)	Number of cattle	Quantity consumed by animals per day
1	2	3	4	5
			Millions	Tons
Bulls and bullocks ...	All @ 1 lb	All @ 1 lb	46.6	20803.6
Cows	$\frac{1}{2}$ „ 2 „	$\frac{1}{2}$ „ 1 „	36.7	8191.9
Cow-buffaloes ...	$\frac{1}{2}$ „ 3 „	$\frac{1}{2}$ „ 2 „	13.6	6071.4
Horses and Ponies ...	All „ 3 „	All „ 3 „	1.9	2544.6
Total quantity of food-grains consumed by animals per day ...	...	...	...	37,611.5
Total quantity of food-grains consumed by animals per annum ...	...	...	...	million tons 13.73

The quantity consumed by animals is similarly calculated for other years of the period from annual figures as given in Agricultural Statistics of India Vol. I and it works out as follows:—

		Millions of tons
1911—12	...	13.73
1912—13	...	13.39
1913—14	...	13.69
1914—15	...	14.10

			<i>Millions of tons</i>
1915—16	...	...	14.23
1916—17	...	...	14.27
1917—18	...	...	14.19

But it must not be forgotten that in bad years when crops fail and the total supply of food-grains is less than the average, animals also do not get as much food grains as they do in ordinary years; and therefore the quantity of food-grains consumed by cattle during these years must be decreased to some extent. As we have taken a very low standard, I think, it would be quite sufficient to decrease the quantity in the same proportion in which the total supply of food-grains falls short of the average supply. In the period under inquiry, as we shall see later on, the final supply falls short of the average in the following years to the following extent:—

1912-13	...	...	4.6 per cent less
1913-14	...	...	11.8 per cent less
1914-15	...	...	2.1 per cent less

Therefore, decreasing the quantity consumed by animals in these years in the same proportion, we finally get the quantity of food-grains consumed by cattle as follows:—

			<i>Millions of tons</i>
1911-12	...	...	13.73
1912-13	...	...	12.77
1913-14	...	...	12.07
1914-15	...	...	13.80
1915-16	...	...	14.23
1916-17	...	...	14.27
1917-18	...	...	14.19

Quantity of food-grains required for seed

To complete the first part of the inquiry it is also necessary to ascertain the quantity of food-grains and pulses required for seed during the period under

review. The standard adopted by Rai Bahadur Ganga Ram about the quantity of food-grains required for seed per acre, compares favorably with that taken from Dr. Harold Mann's *Land and Labor in a Deccan Village* and Mr. N. G. Mukerjee's *Hand book of Indian Agriculture* the figures from which are given side by side in the table below ; and so with a slight modification here and there I have decided to adopt the same standard. The figures for area under different crops in British India can be easily obtained from *Agricultural Statistics of India Vol. I* and the total requirements for seed for 1911-12 are calculated in the following table:—

Kind of Crop	Seed required per acre. R. B. Ganga Ram's Standard	Seed required per acre. From Mr. N. G. Mukerjee's book	Seed required per acre. From Dr. H. Mann's book	Seed required per acre. The standard adopted for the inquiry	Cropped area in 1911-12	Seed Required
1	2	3	4	5	6	7
	lbs.	lbs.	lbs.	lbs.	Million acres	Thousand of tons
Rice	24.7	20 to 30	...	24	76.64	821
Wheat ...	49.4	50	40 to 50	48	25.0	536
Barley ...	41.1	60	...	40	8.4	150
Jawar ...	16.5	10 to 30	8	12	18.4	98
Bajra ...	4.1	6 to 10	5	4	13.1	23
Maize ...	18.5	...	...	20	5.6	50
Gram ...	16.5	15 to 50	32 to 40	32	14.13	202
Ragi ...	24.7	7 to 10	...	24	4.3	46
Other food-grains and pulses.	...	...	16	16	29.5	211
Total ...						2,137

The quantity required for seed for other years of the period is similarly calculated from cropped area

of each year as given in Agricultural Statistics and it stands as follows:—

				<i>Millions of tons</i>
1911-12	...	...	...	2.14
1912-13	...	...	...	2.13
1913-14	...	...	...	2.02
1914-15	...	...	...	2.18
1915-16	...	...	...	2.17
1916-17	...	...	...	2.24
1917-18	...	...	...	2.28

Total requirements of food-grains and pulses

Now by adding up the quantity of food-grains and pulses required by the whole population of British India to maintain them in health and strength and the quantities consumed by cattle and required for seed we are in a position to complete the first part of the inquiry. The total requirements of the minimum quantity of food-grains and pulses stand as follows:—

(In millions of tons)

Year	Quantity required for human consumption	Quantity consumed by cattle	Quantity required for seed	Total requirements
1	2	3	4	5
1911—12 ...	48.46	13.73	2.14	64.33
1912—13 ...	48.70	12.77	2.13	63.60
1913—14 ...	48.94	12.07	2.02	63.03
1914—15 ...	49.18	13.80	2.18	65.16
1915—16 ...	49.43	14.23	2.17	65.83
1916—17 ...	49.68	14.27	2.24	66.19
1917—18 ...	49.93	14.19	2.28	66.40

Total out-turn of Food-grains and Pulses

Now we enter on the second part of the inquiry to find out the total supply of food-grains for different years. In the *Estimates of Area and Yield of Principal Crops* annually published by the Director of Statistics the yearly out-turns of rice, wheat, barley, jawar, bajra, maize and gram are given and in the absence of any better estimates we may take these estimates as a fairly correct representation of the actual out-turns of these crops. But on comparing the area under a certain crop for which the out-turn figure is available in the *Estimates of Area and Yield*, and the area under the same crop as given in the *Agricultural Statistics of India*, Volume I, we find that there is a slight difference in some and considerable difference in others. The difference is due to native states being included in the out-turn figures for some crops and the out-turn figures for some parts of British India being not available in the case of other crops. Therefore I have calculated the average yield per acre in each year from the area and out-turn figures as given in the *Estimates of Area and Yield of Principal Crops*. By multiplying the average yield by the area under the crop as given in the *Agricultural Statistics of India*, Volume I, I have arrived at the figures for the total out-turn of the principal crops. The total out-turns of rice, wheat, barley, jawar, bajra, maize and gram are thus calculated for the year 1911-12 in a table below. But we are confronted with a serious difficulty in finding the total out-turns of *ragi* and "other food-grains and pulses" the out-turn figures for which are not available in the *Estimates of Area and Yield*. The area under these crops can be known from the *Agricultural Statistics of India*, Vol. I, and the only alternative left about them is to find out the total standard normal out-turn, by

multiplying the area under the crop by the average normal yield per acre. Now the average normal yield per acre for *ragi* is given as 1147 lbs., and so its normal out-turn can thus easily be calculated. But with the exception of *arhar*, the figures of average normal yield per acre in the case of "other food-grains and pulses" are not given in the *Agricultural Statistics of India*, Volume I; neither do we exactly know what sorts of grains and pulses are included under "other food-grains and pulses"; nor do we know the extent of area under each one of them. Under these circumstances I have thought it necessary to take an unweighted average of the average out-turn per acre of all the remaining food-grains and pulses as given in Mr. Mukerjee's *Handbook of Indian Agriculture*, as follows:—

				Average Out-turn per acre in pounds.
Oats	...	...	...	1600
Cheena	(Millet)	...	...	600
Shyamma	"	...	...	400
Gondli	"	...	...	750
Kaon and Shyalanja	"	...	...	500
Kodo	"	...	...	600
Arhar	(Pulse)	...	...	600
Kulthi	"	...	...	300
Popator Val	"	...	...	325
Gari Kalai (Soybean)	"	...	...	450
Khosari	"	...	...	300
Musuri	"	...	...	550
Bhringi	"	...	...	200
Kutki	(Millet)	...	...	600
Urd	(Pulse)	...	...	300
Mashkalai	"	...	...	450
Mung	"	...	...	350
Country peas	"	...	...	250
Average				507

And so I take 500 pounds as the average yield per acre in the case of other food-grains and pulses. The total out-turn of food-grains and pulses has thus been calculated for 1911-12 in the following table:—

Kind of Crop	Area under the crop ¹ (1911-12) (Million acres)	Area for which out-turn figures are available	Out-turn from the "Estimates of Area and Yield"	Total out-turn in 1911-12
1	2	3	4	5
		Millions of acres	Millions of tons	Millions of tons
Rice ...	76.6	64.8	30.00	35.61
Wheat ...	25.0	31.1	9.90	7.96
Barley ...	8.4	2.7	0.97	3.02
Jawar ...	18.4	13.2	2.47	3.44
Bajra ...	13.1	8.8	0.14	1.70
Maize ...	5.6	5.2	1.90	2.03
Gram ...	14.1	13.5	4.40	4.61
		Normal yield per acre		
Ragi ...	4.3	1147 lbs.		2.20
Other food-grains and pulses.	29.5	500 "		6.58
			Total ...	67.15

The total out-turns of food-grains for other years of the period are similarly calculated from the figures as given in *Agricultural Statistics of India* and the *Estimates of Area and Yield* and they work out as follows:—

	Millions of tons			
1911-12	67.15
1912-13	63.73
1913-14	58.18
1914-15	62.67
1915-16	66.78
1916-17	70.03
1917-18	68.89

The Wastage of Food-grains

But we have yet to make due allowance for wastage which takes place from the time of the final crop report to the time of actual consumption of the grain. Various are

¹ Taken from "Agricultural Statistics of British India", Vol. I.

the items that can be included under the term wastage. The following are the most significant ones:—

(a) Wastage due to crops getting rotten on the field, when the crop is ripe, by untimely rainfall and on the threshing floor by careless keeping;

(b) Wastage due to defective methods of threshing.

(c) Wastage by pigs, jackals, dogs, poultry, birds and wild animals.

(d) Wastage by small insects (called *ghun* in Hindi) when the food-grains are stored.

(e) Wastage in transshipment.

(f) Wastage by rats and squirrels.

(g) Wastage due to the influence of time, *e.g.* rice decreases in weight if kept for a long time, but improves in quality.

(h) Wastage in transforming the grain to the form suitable for human consumption, *e.g.* removing the outer covering in the case of pulses.

(i) Wastage in grinding, sifting, winnowing and cleaning.

(j) Wastage in cooking and in general consumption.

(k) Wastage at the time of social functions such as marriages, funerals, *etc.*

(l) Wastage due to unforeseen events, such as floods, fires, sinking of boats, *etc.*

The above list is already a long one and more items can easily be added. After a careful consideration I have come to the conclusion that any percentage of the total out-turn which may be less than 10 would surely fall short of representing the actual wastage. Rai Bahadur Ganga Ram has also allowed 10 per cent for wastage; but I fail to understand why he has allowed it on the total human consumption only and not on the total out-turn, because it is from the total out-turn that wastage takes place. In the following table I have allowed 10 per cent of the total out-turn

for wastage and consequently the total out-turn of food-grains and pulses after deducting the wastage stands as given in column 4 below.

Year	Total out-turn (millions of tons)	Wastage 10 per cent (millions of tons)	Total out-turn after deducting the wastage (millionsof tons)
1	2	3	4
1911—12	67.15	6.71	60.44
1912—13	63.73	6.37	57.36
1913—14	58.18	5.82	52.36
1914—15	62.67	6.27	56.40
1915—16	66.78	6.68	60.10
1916—17	70.08	7.01	63.07
1917—18	68.89	6.89	62.00

Excess of Imports of food-grains from Native States

But the figures for total supply of food-grains will not be complete unless we add the excess of imports of food-grains from Native States and subtract the excess of exports of food-grains to foreign countries. *Inland Trade (Rail and River-borne) of India* gives statistics for exports and imports of food-grains from Kashmir, Rajputana, Central India, Hyderabad, and the Mysore State; and from these figures the excess is calculated in the following table:—

Year	Imports of food-grains from Native States, cwt.	Exports of food-grains to Native States, cwt.	Excess in cwt.	Excess in thousands of tons
1	2	3	4	5
1911—12	9207	4093	5114	256
1912—13	12494	6293	6201	310
1913—14	11336	5791	5545	277
1914—15	9205	5850	3315	166
1915—16	11189	6425	4764	238
1916—17	12312	5395	6917	346
1917—18	10370	4247	6123	306

Excess of Export of food-grains to Foreign Countries

The *Review of the Trade of India* similarly gives figures for exports and imports of food-grains to and from foreign countries, and the excess of exports of food-grains is calculated in the following table:—

Year	Total exports of food-grains to foreign countries in cwt.	Total import of food-grains from foreign countries in cwt.	Excess in cwt.	Excess in millions of tons
1911—12	102400	191	102209	5.11
1912—13	110297	185	110112	5.51
1913—14	83895	370	83525	4.18
1914—15	51418	774	50644	2.53
1915—16	48719	1143	47576	2.38
1916—17	58293	254	58039	2.90
1917—18	90274	88	90186	4.51

Total Supply of food-grains and pulses

The figures for the total supply of food-grains and pulses in British India finally stand as follows:—

(In millions of tons)

Year	Total out-turn excluding wastage	Excess of imports of food-grains from Native States	Excess of exports of food-grains to foreign countries	Total Supply
1911—12	60.44	0.26	5.11	55.59
1912—13	57.36	0.31	5.51	52.16
1913—14	52.36	0.28	4.18	48.46
1914—15	56.40	0.17	2.53	54.04
1915—16	60.10	0.24	2.38	57.96
1916—17	63.07	0.35	2.90	60.52
1917—18	62.00	0.31	4.51	57.80

(To be concluded)

CURRENT NOTES

Since the publication of our last Current Notes the profound economic disturbances resulting from the war have had time to work themselves out clearly, though not to a conclusion. The efforts of European countries to re-establish normal economic life have so far been frustrated by two uncontrollable forces, of which the first is mainly psychological, the second more strongly economic. The widespread war-weariness is partly responsible for the labor unrest prevailing in all the belligerent countries. The customary routine has been broken. Labor has realized that ideals can be fought for and achieved; it has seen force prevail, but profiteering capitalism still rampant. Continually rising prices have made men restive; whilst the considerable earnings of some sections of the working classes have led them to regard more leisure as their greatest want. The second obstacle is the poverty of the belligerent countries in the commodities which the rest of the world requires. France, Germany, Italy, Austria and Hungary are seeking desparately to buy from England, America and other countries; but having little to sell the exchanges have turned against them to an almost unbelievable extent, and no international arrangement seems capable of righting them.

The Report of the Indian Currency Committee (1919), presided over by Sir Henry Babington Smith, was published early in February last. It immediately caused the greatest crisis in exchange which this country has experienced, on account of the notification by Government that the policy recommended by

the Committee was to be applied immediately. It is necessary to distinguish between the merits of the new policy itself, which we entirely approve, and the method of its initiation. The Committee recommended a permanent currency system with the rupee rated at ten to the sovereign, and consequently a gold par rate of exchange equal to 2s. The depreciation of the pound sterling in Great Britain, which became serious in September, 1919, made it appear necessary to fix the sterling rate of exchange between India and London at a rate corresponding with the depreciation of sterling against gold, which is measured by the discount of the New York exchange, termed in India the "cross rate." With the dollar exchange at 3.45 to the £1 the corresponding Indian sterling exchange would be 2s. 10½d. Realizing that this must soon be the prevailing rate, exporters rushed to discount their bills, and exchange rose rapidly. There being much liquid capital in India awaiting investment in imported goods and machinery, there soon followed a rush to remit funds to London, which the result that exchange after standing at 2s. 11d. for a short time fell away considerably below the sterling rate corresponding with the "cross rate" at which Government undertook to sell Reverse Councils. The balance of trade has in fact turned strongly against India, due to the growth of imports and decline of the buying power of other countries for India's cotton and other products. Consequently over £30,000,000 Reverse Councils have been sold, and the market rate of exchange still hangs below the parity of the "cross rate."

A most successful conference of the Indian Economic Association was held in Madras early in January, Lord Willingdon being President of the Reception Committee. The Association exists for the advancement of

the science of economics in India. All persons engaged in teaching economics or interested in the study of the science may become members on being admitted by the Committee at its annual meeting held immediately before the Conference. Persons who apply for membership between such annual meetings and have paid the amount of the annual subscription to the Honorary Treasurer will be entitled to full privileges of membership, except voting. If an application for membership should be rejected by the Committee, the subscription paid will be returned in full or after deduction of the price (at the concession rate for members) of any numbers of the *Journal* or other publications which may have been supplied to them. The annual subscription has been fixed at Rs.12 which will entitle members to attend the Conference, and during the present year will entitle the members to receive three numbers of the *Indian Journal of Economics*, which has been adopted for the present as the official medium of the publication of the Association's proceedings. Persons resident in or near the town at which the next Conference is to be held may become associates for a period of twelve months on payment of Rs.6 which will entitle them to attend the Conference and to receive the volume of proceedings, but not any other number of the *Journal*. Applications for membership of the Association should be addressed to the Honorary General Secretary, Professor J. C. Coyajee, Presidency College, Calcutta. The next Conference will be held in Madras from December 31st, 1919, to January 3rd, 1920. Applications for associateship with a view to attendance at this Conference must be addressed to the Local Secretary. The constitution and rules of the Association have been printed and are circulated to members, and the Committee has decided that printed copies of the minutes of the

business meetings of the Association shall be available for members who apply to the Honorary Secretary for them. The financial year of the Association will close at the end of September in each year, and any membership subscriptions accepted now from persons who did not attend the Conference in Bombay will refer to the year commencing 1st of October, 1919. If such members desire to obtain for their own use any issues of the *Indian Journal of Economics* published prior to the 1st October, 1919, they may, after their subscriptions have been paid to the Honorary Treasurer, be supplied at the concession rate of Rs.2 per number.

The development of the study and teaching of economics and allied subjects continues to take place in the University of Bombay. The Sydenham College of Commerce and Economics was established under control of the University some four years ago and has begun useful work in training students for a commercial career, although owing to the war the full staff as originally projected has never been appointed, and it has had to work in unsatisfactory hired quarters owing to the necessary delay in erecting a suitable building. Notices were issued a few months ago by the University of Bombay of its intention to found a School of Economics and Sociology with the objects of promoting the study of Indian social institutions "with reference to their effects on the economic and industrial life of the people" and of conducting research in economics and sociology. As a beginning two University Professors are being appointed, one in economics and the other in sociology. The salaries advertised for each were Rs.1,000 to Rs.1,250 per mensem according to qualifications. There is to be an Assistant Professor in each of these departments with pay of Rs.500 a month.

The University will also send abroad at its own expense selected Indian graduates for the purpose of being trained in research methods.

The Assistant Professors may suitably be young men who have distinguished themselves and had three or four years teaching experience; but the Heads of the new Departments ought to be men of strong mental calibre and wide experience. For any such men the salaries offered are ridiculously inadequate, especially having regard to the very high cost of living in Bombay. There is a most unfortunate failure on the part of Government and University Syndicates, as well as on the part of the public, to recognize the high level of ability needed in professors of economics, if they are to be of any real public service for diffusing sound learning in the subject and for promoting research. Economics is at once an observational and a mathematical science of the most intricate complexity. We doubt whether there are more than three or four Indian economists in the world who have a real grasp of the subject. This is not because Indians are in any way unfitted for the subject or even solely because the secondary and early University education provides insufficient training in intellectual effort of the kind needed which is certainly the case. The main reason is that the type of ability needed for success in economic investigation can command much higher remuneration in other professions. Indians of the calibre fitted to be university professors of economics have no difficulty in getting into the Indian Civil Service or the Indian Finance Department and can look forward to ultimately reaching a salary of Rs.2,000 per mensem and a comfortable pension. If they decide to go into the

law or into business, they can hope to earn anything from Rs.3,000 to Rs.5,000 per mensem after ten or fifteen years' steady work. The keen counter-attraction of professional employment in the case of engineering and medicine is fully recognized, and the professors of such subjects are given much higher salaries than the professors in the arts and pure sciences. It needs to be most fully and clearly understood that the economic writing and teaching of Indians in India will remain at its present very low and inefficient level so long as the whole profession of economists is degraded in India by the payment of ridiculously low salaries. It is the same story at all stages. We have the "professor" of economics at the mofussil college at Rs.150 per mensem. In the Provincial Educational Service we have professors of economics of many years' experience employed at Rs.350 per mensem; and so on throughout all stages up to the proposed employment of University Professors of Economics in the great University of Bombay at Rs.1,000 per mensem. We trust that this subject may be brought forward at the next Economic Conference and be thoroughly debated with a view to the information of the public as to the evil results which must follow from the continuance of a system which brings only second rate men into the very service in which the country stands in the greatest need of the best advice.

REVIEWS OF BOOKS

RELATING TO INDIA

Some South Indian Villages ; edited by GILBERT SLATER, D. Sc.,
Professor of Indian Economics, University of Madras.
Oxford ; University Press. 1918. pp. 265.

This volume, which forms the first of a series of Economic Studies to be issued from the Department of Indian Economics of the University of Madras, contains one full-length economic survey of a South Indian village by the editor, Dr. Slater, eleven full-length surveys on the same general plan by student-contributors, and certain notes on, or extracts from surveys of, ten other villages.

Even if it represented nothing more than the essays in Social Economics, based on first-hand information, of the sixteen students (all but two of them undergraduate students) who have contributed to it, this volume was well worth publishing as showing the kind of work which the Indian student is able to do in this field, and to do well, under experienced guidance. The contributors themselves are to be congratulated on attaining a remarkably high level of performance. No doubt their work has owed much at every stage to the labors of the editor ; but his shaping hand has not destroyed the individuality of the various contributions, which in most cases bear the impress of the special preoccupation or even bias of the author. This makes them all the more vivid and readable. Regarded, however, as a basis for any general conclusions, except of the most tentative kind, as to the economic condition of the South Indian peasantry, it must be admitted that the material as a whole suffers from being drawn from a field so vast as

to embrace the Godavari and the Kistna districts in the north of the Presidency and the Tinnevely district in the extreme south. No doubt this was inevitable in the circumstances. "Each student", Dr. Slaters explains (p. 21), "chose his own village, it might be his native village, or some other village where he had friends, and where it was convenient for him to spend the vacation." Now, obviously, this kind of "sampling" is a good method to employ in a field where economic conditions, in general, are sufficiently homogeneous; and it is partly on this account that the four admirable surveys relating to the West Coast constitute what is, perhaps, the most important and valuable part of the volume. But when applied, indiscriminately, to the rest of the Presidency, it yields results which, owing to widely varying conditions of soils, rain-fall, density of population and the like, are not strictly comparable, and so lose much of their value. We may hope, however, that as the number of investigators whom Dr. Slater is able to set to work increases, and when, consequently, there will be a greater body of material to select from, it will be possible to concentrate attention on one or two districts of a homogeneous economic character.

It is also desirable that in certain directions the enquiries themselves should be of a somewhat more intensive character. Several of the contributors to the present volume have given useful family budgets; but no economic survey of an Indian village can be considered complete which does not include detailed budgets of typical families—families, that is to say, typical of the different strata of the population. Too little information, again, is given as to the standard of living among different classes. Particulars are given in a good many instances of the type of house such and such a class live in, occasionally also of the kind of food they generally consume; but little or nothing is said as to clothing, ornaments, household furniture, or cooking utensils. Dr. Slater's own remarks on the subject of household furniture (p. 232) suggest a standard of living which is unusually low even for India.

The four surveys relating to the West Coast—one relating to the Cochin State and the other three to the Malabar district—are of exceptional interest. Dealing as they do with conditions of a strongly homogeneous character, they

possess a unity which is lacking elsewhere in the volume; and the conditions they describe are entirely different from those to be found in any other part of India. In the first place, the absence of villages in the usual sense of the term is a striking characteristic. "The *desam* is the political and social unit in Malabar, and is the nearest equivalent to the village of the east. The chief differences, however, are: (1) the village organization, in its entirety, is not found here; (2) the village has no particular site. The population is distributed throughout the *desam* area." (p. 163) Next, there is the unique landlord tenure of Malabar, known as *janmam*. In the villages here dealt with the landlords or *janmis* are, generally speaking, men in a fairly big way, belonging to the Nambudri or Malabar Brahman community; though smaller *janmis*, or *janmis* belonging to other castes, may also be found in the same village. The *janmi* usually lets his land to *kanamdars* on a peculiar 12 years' lease; but these, in turn, frequently sublet. It is not surprising to learn, considering the conditions of tenure and the extraordinary density of population (5 persons per acre in one village), that the actual cultivators are rack-rented, and that the production of land shows a marked deterioration. A formidable indictment is drawn up against the *janmis* of one village for exactions and oppression practised on their *kanamdars*. (p. 168) The Nambudri community is in itself a fascinating study. "The Nambudri Brahmans pursue no occupation but that of living in strict conformity with the duties of a Brahman. They study the Vedas, and live a pious and cleanly life. Western civilization and ideas have not penetrated to them. They maintain the joint-property system in which the whole property descends to the eldest male member. . . . Only the eldest male member of a Nambudri family can marry in his own caste. All the other sons keep Nayar women as mistresses. The eldest member can marry more than one wife, but many women have of necessity to remain unmarried." (pp. 129, 160).

In the extracts published of the survey of a South Kanara village some interesting particulars are given of a Billava house-community, which consists of 40 members. The administration of the joint property and of the household is usually entrusted to the eldest male member; but

inheritance is in the female line, as among the Nayars of Malabar. (p. 214)

One institution which is common to the villages on the West Coast, dealt with in this volume, and a number of those dealt with in the eastern districts is that of agricultural serfdom. The following is the account given of this in the report on one of the Malabar villages. "There is a sort of agricultural serfdom, the Cherumas being the victims. Of course it is not legally recognized and is breaking up. These Cherumas who do the greater part of agricultural work, are paid from one and a half to two *edangalis* of grain, supplemented by certain allowances during sickness, festive occasions, women's lying-in, etc. A sort of feudal or patriarchal relationship prevails between these and their employers. They are attached to certain families and get work, or at any rate are paid, throughout the year. . . . In very recent times some of these Cherumas have begun to emigrate. But this is uncommon owing to the covert opposition of their masters." (p. 193)

The above rate of wages for labor of this class, which appears to be the rate invariably paid on the West Coast, works out to rather less than $1\frac{1}{2}$ seers of husked rice per day. The rate of wages in kind for free labor appears to be from 2 to 3 seers. In the eastern districts, although free labor gets even higher wages as a rule, the common rate for the equivalent class of labor is actually lower, viz., rather less than one seer per day. The following is an account given of the *padiyal* or *pannaiyal*, as he is called on this side. "Each, at the time of his employment, gets a sum varying from Rs.15 to Rs.35, which he enjoys free of interest as long as he serves under his master. If the laborer transfers his services to another master, the amount will be returned by the new employer; if the laborer runs away the mirasdar loses the amount. Sometimes some of them run away to the emigration depot at Negapatam. Otherwise, as they are not able to discharge their debts, they have to toil for their masters perpetually. There are families of these laborers hereditarily working under particular mirasdars." (p. 209)

Turning now to the surveys of raiyatwari villages in the eastern districts, a useful distinction may be drawn between villages in which there is little or no subletting

and those in which subletting is the rule. Among the latter we may distinguish, again, between villages in which there are a few pattadars, with comparatively large holdings, who are accordingly in fairly comfortable circumstances, and those in which the number of non-cultivating pattadars (generally Brahmans) is very large. The village in the South Arcot district surveyed by Dr. Slater is an example of the first of these two latter classes, 400 out of 636 acres of cultivated land forming the holding of one family, which cultivates 200 acres by the labor of 40 *padiyals*, and sublets 200 acres, chiefly to smaller cultivating pattadars (p. 8). Another is a village in the Kolar district of the Mysore State in which out of 140 acres of wet and 300 acres of dry land, one family holds 100 and 140 acres, respectively, most of which it sublets (p. 104). Examples of the second class are a village in the Tinnevely district in which 1,000 acres of wet land are divided among 459 pattadars (p. 58), and another village in the same district in which 600 acres of wet and 2,000 acres of dry land are divided among 374 pattadars (p. 221). Very significant is the following note on the second village. "All the land was originally in the hands of Brahmans. Now more than half the patta are in the hands of people outside the village. Though the Brahmans in the village depend wholly on the land, yet no Brahman as yet tills his own plot. Many families have been obliged to sell their holdings to pay their debts, contracted either (1) because the holdings by subdivision became too small to support a family, (2) to pay for the education of sons, (3) more frequently, to obtain husbands for daughters." A good account of the system of share-rent in which the tenant cultivator supplies only the seed and labor, or the labor alone, is given on p. 59. Small holdings appear to be generally sublet on this system, the tenant's share varying from one-fourth to one-eighth of the produce. Often the proportion is one-sixth, as in the case of the *hektemoroi* of classical Greece.

Examples of villages in which there is little or no subletting are the following: (1) a village in the Ramnad district in which 2,050 acres of cultivated land are divided among 94 cultivating pattadars (p. 32); (2) a village in the Salem district in which 750 acres (supporting a population of over 2,000) are divided among 256 separate landholders,

all but six of whom cultivate their own land (p. 20); (3) a village in the Tanjore district in which 1,040 acres of exceptionally fertile land are divided among 132 pattadars, some of whom have fairly large holdings, but practically all of whom cultivate themselves the greater part of their holdings (p. 78). In the second of these villages the predominant caste consists of Vellalas (Tamil agriculturists); in the first and third it consists of Telegu-speaking agriculturists (Nayakas or Nayadus). An interesting picture of the typical Nayadu farmer is given on p. 82. These are villages in which true peasant-proprietorship is to be found; and it is not surprising that the communal life of such villages should be more strongly marked and more vigorous than elsewhere. Very interesting particulars are given in the report on the Ramnad village regarding the customary dues paid to the village servants. "The *carpenter* gets 4 marakkals (=26 seers) of paddy for every plough that he makes and $2\frac{1}{2}$ marakkals for every kamalai (=waterbucket). His earnings come to about Rs.120 a year. The *blacksmith* also gets the same rate of wages for a plough and a kamalai. Each of the two *washermen* gets $12\frac{1}{2}$ kotahs (value Rs.125, weight about $31\frac{1}{4}$ cwt.), and something more than two meals a day, for he gets a small quantity from each villager. Each of the two *barbers* gets $6\frac{1}{2}$ kotahs of paddy a year (Rs.62 $\frac{1}{2}$), besides a small quantity of food from each house. The *tailor* gets $12\frac{1}{2}$ kotahs of grain (Rs. 125) and 2 meals a day." (pp. 38,9)

In the report on a village in the Chittoor district there is mention of a zamindar (p.97), but no information is given as to the character of the Punganur Zamindari to which the village is said to belong. In the case of a village in the Kistna district we are told (p.112) that "most of the land is cultivated by the pattadar, but 226 acres are sublet to tenants." Is this also a zamindari village? On p.228 the local *pothi* of jaggery is obviously much less than 400 seers. The estimate of the total village income given at the foot of p.155 is clearly wide of the mark. It is apparently based on the total sales of the village shop, deducting sales to outsiders.

In his concluding observations Dr. Slater offers some interesting comments on the conditions of rural life in Southern India as revealed by these enquiries, and indicates the directions in which, in his opinion, further enquiry is needed

The volume is provided with a useful index and a most instructive glossary.

A Monograph on Indian Railway Rates. By S. C. GHOSE.
Calcutta: Superintendent Government Printing. 1918.
pp. xiii, 595. Price Rs. 3, or 4s. 6d.

The development of railways in India was essentially a matter of compromise. If any definite principle has at any time been adopted by Government towards railways, it has usually had to be abandoned after a few years owing to force of circumstances. Consequently, the history of railway-building in India is long and complicated, and the number and the intricacy of the agreements between Government and different Administrations, and between these latter themselves is such that many years' study would be needed thoroughly to understand the business arrangements of the Indian railways. It is not surprising, therefore, that the railway freight rates have become involved in the confusion of piece-meal development by different companies. This monograph was written whilst Mr. Ghose was at Simla as a Special Officer with the Railway Board. The actual writing of the book occupied, he says in his preface, from July, 1917 to January, 1918, and the rates quoted are those from tariffs which were published up to October, 1917, whilst the traffic statistics relate to June 1911 and 1912, as those were fairly good average years.

The work is comprehensive in its scope. The early part of the book is historical and gives a very valuable summary of the development of Indian railways which was not easily obtainable elsewhere. The first chapters contain a history of railway building, and the development of rates and fares, and of the Government policy in relation to railways. The multiplicity of agreements regarding the working of railways is very well illustrated in this section of the book. The remainder of Part I is devoted to a discussion of railway rates and fares as they exist at present on the Indian railways together with some discussion of the legal and theoretical aspects of the questions governing railway rates. It is rather surprising to find chapters on the economics of transportation coming at the end after all other aspects of the question have been discussed. As a matter of fact, there is very little actual discussion of the questions of pure

economics involved in railway rates. The Author is essentially a practical man who has himself been a railway manager, and later was concerned with the promotion of new branch lines. At every stage of his enquiry he looks at the matter with the eye of the practical man, keeping before him all the details of rates, distances, wagon loads and innumerable other facts as they now exist on the Indian railways.

Part II of the book is devoted to a series of chapters on the principal articles of commerce, and justification or criticism of the special rates which have been made for them. Part III includes a number of Appendices on special subjects amongst which we find one on the economics of transportation and another on the simplification of goods tariffs. At the end of the volume is an excellent map of Indian railways.

The book is a veritable mine of information for the student of Indian railways from their economic, administrative and historical aspects. It will form a standard book of reference which, together with the annual administration reports of the railways ought to be available in all college and public libraries.

REVIEWS OF BOOKS

ENGLISH

Industry and Trade—A Study of Industrial Technique and Business Organization; and of their influences on the conditions of various classes and nations. By ALFRED MARSHALL. London: Macmillan & Co. 1919. pp. xxiv, 875. Price 18s. net.

The appearance of another work by Professor Marshall is an outstanding event in the progress of economic science. We have for many years been expecting the appearance of a second volume of the *Principles of Economics*; and at times it even figured in the publisher's catalogues. The present volume, however, is not exactly the intended second volume of the *Principles*, although embodying some of the matter which was actually set up in type for it; but is a new work bearing much more closely upon the actual economic structure of our present civilization. It is concerned especially with the technical evolution of industry, and its influences on the conditions of man's life and work. The author states in his preface that it is his intention that it shall be followed by a companion volume "which is to be occupied with influences on those conditions exerted by the resources available for employment; by money and credit; by international trade; and by social endeavour."

The volume falls into four parts, namely, Books I, II and III, and a group of Appendices lettered from A to P. Book I is intended broadly to indicate and explain some of the chief origins of the industrial technique and organisation that now prevail in the western world. In method of treatment it is on the whole theoretical with a historical basis. It is, however,

concrete in the illustration of the principles, in tracing of their action in definite countries—England, France, Germany, and the United States. Book I is not in any sense a contribution to economic history. In the author's own words, "its aim is merely to indicate that the present structures of industry and trade, in so far as they are considered in the present work, are, for the greater part, direct and almost necessary consequences of conditions, which have developed almost continuously from the Middle Ages to the present time. The particular facts, to which attention is directed, have no other claim to precedence over those which are ignored, than that they seem in a special sense responsible for the good and the evil of some of the economic features of the present age."

Book II deals with the "dominant tendencies" of business organizations, and is concerned with the economic structure of industrial commerce in the most advanced countries. We find it dealing with such subjects as "systematic record and standardization", "The size of the representative business unit", "organized produce markets and constructive speculation", "the problems of general marketing", "the financial basis of business organization", and the "growth and influence of joint stock companies", and finally, "the various applications of the scientific method in industries", which includes a chapter on scientific management. The treatment of Book II is such as to consider the problems of industrial technique and business organization with little reference to monopolistic tendencies.

In Book III, on the other hand, the play of monopolistic tendencies is the dominant note. There are two chapters on the various influences of monopoly on prices; four chapters on competition and monopoly in transport; four chapters on trusts and cartels; and three on aggregation, federation and co-operation in Britain's industry and trade; whilst the last chapter deals with a most interesting subject, "the decline of exclusive class advantages in industry". In Books II and III there is, as the author remarks, "an ever increasing drift towards consideration of the harmonies and discords of interest among the several sections of the nation, and between each of those sections and the nation as a whole".

The volume as a whole covers an extremely wide range of both facts and theories as regards the economic struc-

ture of modern civilisation, and it has all the well known merits characteristic of Professor Marshall's style. Every paragraph deals with one of the varied aspects of a question, or introduces an important qualification lucidly stated. It is a pleasure to note the care and accuracy of thought which has gone to the construction of every sentence: how much is expressed here and there by the mere use of an adjective. The chapters are clearly divided into sections with summary headings; and there are plenty of cross references. Furthermore, we find, as in the *Principles*, a wealth of footnotes containing apposite illustrations, and additional opinions of interest in connection with the main theme.

It is almost impossible, in a book covering such a wide scope, so much and in detail, to single out for notice or comment any subjects which are of special interest. We may, however, refer to a few of the chapters and appendices which have especially attracted our attention.

Chapter I of Book I contains some general introductory observations, many of which are of great interest. Thus we learn that "national industries and national trade act and re-act on one another, but the dominant force is that of industry". Again we are told that, "Economic conditions are mostly the result of slow and gradual development; and partly for that reason, they commonly show the One in the Many, the Many in the One. It is necessary to look backwards a little, in order the better to look forwards."

In Chapter II are discussed the general relations between industry and trade. We have in fact here an introduction to the theory of international trade, and the author commences by pointing out that international trade is only a development as between political entities called nations of the internal trade, which takes place between local groups within a country. His own words will convey the ideas best: "The only full statistics of trade are those which are collected by customs house officials at the frontiers of countries; and therefore imports and exports always suggest the notion of goods passing between different countries. But the elementary principles, with which we are concerned in this chapter, have no reference to nationality; they are almost as applicable to the trade between two neighboring parts of the same country as they are

to international trade. Therefore the illustrations will be generally taken from that particular kind of trade, the statistics of which are accessible and familiar; but the argument will be understood to apply also in a great measure to the external trade of any province or county, such as Normandy or Lancashire, or of any industrial city, such as Leeds or Chemnitz. If the local spirit of any place ran high: if those born in it would much rather stay there than migrate to another place: if most of the capital employed in the industries of the place were accumulated from those industries, and if nearly all the income enjoyed in it were derived from its own resources:—if all these conditions were satisfied, then the people of such a place would be a nation within a nation in a degree sufficient to render propositions, which relate to international trade, applicable to their case from an abstract point of view; although in the absence of any statistics of the imports and exports of the place, they would to some extent still lack reality." We may add that Bengal would be a good example or such an economic nation within a nation. Fortunately, in India we have, however, fairly complete statistics of the "international trade" of Bengal in the annual publication issued by the Department of Statistics on *Inland Trade (Rail and River borne) of India*. The rest of Book I traces with fascinating interest the growth of Britain's industrial leadership under the conditions which led to success, the challenge to supremacy by Germany, and the influence and the peculiar characteristics of the industrial leadership of France.

In Book II is condensed an enormous amount of information as to the development of modern economic effort. Much information and many conclusions will be already familiar to economists who have read widely in English and American books and economic journals on all subjects connected with industrial organization; but, even though some of the chapters do not contain much that is original, they form an extremely convenient and authoritative summary of facts and of the best opinion as to the economic tendencies of modern organization. In Book III we have been especially interested with the extensive treatment of problems of transport—sea freights and shipping "conferences"; problems of railway rates; competitive routes and the distribution of costs of

operation; and finally, the rôle which Government should play in regulating the development and operation of railways, with some words about the advantages and dangers of nationalisation. As usual we have from Professor Marshall a balanced judgment. The chapters which deal with cartels—with combination in British manufacturing industry, and with labour problems and the relation of education to industry, are full of useful information, and of liberal and well informed views on the subject.

Finally, we must say a few words about the numerous appendices. Some of them deal with protective tariffs and other problems connected with international trade, which have relation to the subject matter of the present volume, but are also an anticipation of the subject of the second volume. Other appendices relate to particular problems treated in a practical or special manner and thus not fitting into the general structure of the work. Three of these will be read with special interest in this country. The first of these is Appendix I, which contains a section on the "catastrophic condition of food supply in early times and its gradual improvement," in which the former conditions in India are described. The following quotation from a foot-note on p. 781 is of especial interest: "Conversations held some years ago with experienced Indian administrators, in which the practice of Indian village dealings in agricultural products, and the minor commodities of the *hat* (or village market), was compared with the dealings of the villagers in remote English rural districts, led me to the conclusion that custom had less to do, and keen bargaining had more to do, with the purchases of Indian *raiya*s than with those of the English village. It may be hoped that suggestions derived from studies of India and other countries in like conditions . . . may explain many of the apparent paradoxes of English mediaeval history: and show that custom is often the gradual result of economic conditions; even where it appears at first sight to be their governing cause, rather than their effect."

In Appendix K, we have a brief essay on education with special reference to a business career, and university training for the responsibilities of business. In Appendix L we have an extremely interesting and important treatment of the taxation of the produce of agricultural land, which

has a close bearing on the economics of the land revenue in India.

The book is easier reading, and, because of its close application to the actual facts of modern business life, in many ways more interesting than the *Principles of Economics*. Its pages give evidence also of a very decided advance in the author's outlook on the study of the social organism, on social questions of the day, and on industrial questions which have a political bearing. Some may wish that Professor Marshall had gone further and dealt as fully with socialist doctrine, and with the proposals of industrial reconstruction associated with that school of thought, as he has done with other current theories and opinions. This omission, however, does not detract from the value of the book. Socialists who will take the trouble to read this volume will obtain the firmest foundation for a knowledge and understanding of the economic structure of the competitive system which they could possibly obtain from any single work. It is indeed remarkable that the author, who needed the academic seclusion of Cambridge for the writing of so great a work, has yet kept himself so closely in touch with the current of modern events and contemporary opinion. *Industry and Trade* is obviously a standard work which should find a place on the shelves of every college in India.

H. S. JEVONS

The Making of the Future Series. A Popular Library of Regional, Human and Civil Studies, and their application to Current Issues. Edited by Prof. PATRICK GEDDES and Mr. VICTOR BRANFORD. London: Messrs Williams and Norgate. Crown 8vo.

The Coming Polity. A Study in Reconstruction. By Prof. PATRICK GEDDES and VICTOR BRANFORD. 1917., pp. xvii, 264. Price 5s. net.

Ideas at War. By Prof. PATRICK GEDDES and Dr. GILBERT SLATER. 1917. pp. xvii, 256. Price 5s. net.

Human Geography in Western Europe. By H. J. FLEURE, Professor in the University College of Wales, Aberystwyth. 1918. pp. xiii, 264. Price 5s. net.

This trio of books is an excellent beginning for the series on "The Making of the Future," and all of them bid fair to be of

outstanding interest and importance. The other volumes announced are: *Social Finance* by Charles Ferguson; *University and City*, a study in personality and citizenship, by the editors; *The Land and the People*, dealing with rural development, by Harold Peake and others; *Westminster, Temporal and Spiritual*, an interpretative survey; and *Science and Sanctity*, a study in spiritual renewal.

The series is designed to prepare the way for the new age in which the cult of things, the fetish of material prosperity, is to give way to an economy devised in terms of life, personality and citizenship, in which man himself is studied, and all social activities are planned to create a noble, happy and spiritual people. The emphasis must be shifted from the lifeless studies of chemistry, physics, and engineering, to the living biological and human subjects: natural history, ethnology, and their geographical foundations.

The Coming Polity is an introductory volume to the series, and is thus to a large extent methodological; but nevertheless it covers a wide range, from the interpretation of history and politics, to a geographical study, and a glimpse of the rural problem. A chapter entitled "The Regional Drama" vividly presents the most striking ideas of human evolution; and it is followed by studies of the relation of town and country, state and city, the authors deploring the eclipse of the regional capitals by the metropolitan cities, the national capitals of great states. The authors are disciples of two great French social philosophers Le Play and Comte; and the next two chapters are an exposition and application of their doctrines. Of Le Play we read "Having first fully grasped the idea that the unit of social life, and therefore also of social investigation, is the working-class family, he centred his busy lifetime of travel and research upon the comparative study of working-class families in most of the countries of Europe." The penultimate chapter on "The coming University Militant" pictures the road of progress through amalgamation of the University and civic life—active and constructive public service, and civic studies, to be part of every degree course.

Ideas at War is a study of the tendencies of the past and present ages—a most comprehensive synthesis, throwing many new lights on the causes of the recent gigantic conflict, and exhibiting the true principles of reconstruction

to secure lasting peace and social progress. Throughout the whole, we see history as a process of evolution, wherein Comte's four great classes: chiefs, intellectuals, emotionals and people are always re-appearing in new guise under the most varied outward conditions of civilization. Normally these are in equilibrium: the stormy periods of history—religious wars, revolutions, civil wars and world-conflicts—arise when a new phase of expression disturbs the equilibrium. In Germany the chiefs and intellectuals overbalanced the emotionals and the people; and whole nations had to go upon the march to restore the balance. In Russia the Bolshevik revolution is intelligible as a destruction of chiefs and intellectuals by emotionals and people.

The book abounds in suggestive interpretations of historical and recent events, and the spiritual aspects of recent European life are sifted out. In the chapter "Materials of Reconstruction" there is a survey of the condition social, economic, vital and spiritual, prevailing as a result of the war, and this leads to chapters on reconstruction and the future lines of social growth, full of suggestive ideas, if tantalisingly vague in their conclusions. We cannot agree with the authors in some of their economic teaching, notably a statement that the arithmetical and mechanical trend of education was the cause of life's values being reduced to money measure (pp. 98-9), which is in reality purely the natural result of the growth of exchange with improvement of productive processes and transportation. Both economists and historians, however, will gain many ideas and a new outlook by reading this book.

Democracy at the Crossways. BY F. J. C. HEARNshaw.
LONDON: MACMILLAN & Co. 1918. pp. xv, 511 Price
15s. net.

This is a note-worthy book which ought to be widely read in India where there is much misunderstanding of the nature of democracy and representative government. The Author begins by distinguishing between democracy as a form of state and democracy as a spirit of the people, and he shows that either may exist without the other. The latter exists when society as a whole has democratic ideals: that is, the equality and mutual responsibility of man to man must be recognized and acted on. The author concludes that democracy is the only form

of state ultimately tolerable, but that not every people is yet ripe for democracy. When established, it must be of the representative type, including the rule of the majority, which is impeded by proportional representation and other devices for securing the representation of minorities.

The argument is based largely upon historical evidence, and in his political theory the Author has drawn on all the standard authorities of recent and classical times. The book is extraordinarily interesting reading and provides much food for thought. On the other hand, unfortunately, it applies essentially to Great Britain, in which the political conditions are extremely simple compared with most countries. The Author makes but slight reference to India, which is a pity, because many of his principles could be well illustrated and confirmed by Indian experience, whilst others might be controverted. It is surprising how political theorists of Europe and America persistently overlook the British Indian political system under which 250 millions of people are living.

State Credit and Banking—During the War and After. BY ROBERT BENSON. London: Macmillan & Co. 1918. pp. 53. 5s. net.

The Author advocates the establishment of a great Central Bank for the United Kingdom with a State guarantee for the purpose of making loans on the security of British Government debt with a view to financing after-the-war trade. His view is that the Bank of England needs to utilise all its resources for the financing of trade by lending on trade securities, *i.e.*, bills. In its working the new central institution would receive advances from the joint-stock banks and itself advance directly to customers. Thus if the central institution received a thousand million sterling from the joint-stock banks, their deposits must also increase by the same sum after the amount has been lent out by the Central Institution to its customers. The Author's argument that this would not lead to inflation and further rise of prices is by no means convincing.

In our view there is no need for this vast creation of credit, as there is plenty of capital available in Great Britain at the present time. It is commodities rather than money which are needed for the revival of trade. The book contains many financial statistics and charts and several interesting

quotations from various authorities; so it is worth perusing even though the Author's thesis cannot be accepted.

A Levy on Capital. BY F. W. PETHWICK LAWRENCE. London: Geo. Allen & Unwin Ltd. 1918. pp. 94. Price 3s. 6d.

This little book deals with a very complicated financial problem in a manner entirely consistent with sound economic theory, as one would expect from one who was formerly a pupil of Professor Alfred Marshall. The book has several merits: its proposals, though drastic, seem to be of a practical character, and the best that can be adopted to meet the financial situation of Great Britain; and furthermore, it is written in a clear and simple style, so that this difficult subject can be studied by a layman, and yet the economist or the financial expert will read it with pleasure.

Mr. Lawrence's proposal is that the whole of the net State debt of the United Kingdom, which he estimated would be six thousand million pounds at 31st of March, 1919, should be paid off by a levy on capital of all kinds throughout the country. The rate of levy on the capital would be strictly graduated by numerous stages. Taking round numbers, estates of £1,000 would pay 9 per cent, of £10,000 26 per cent, of £100,000 44 per cent, and of £1,000,000 62 per cent. Since the payment of such a vast sums in cash would be impossible within a short time, and inexpedient even over a series of years, the author suggests that the State should have the power of taking over the actual physical property: landed estates, factories, dwelling houses, etc., or of taking shares in their income until the property can be conveniently realized. The State would thus become a share-holder in mills or industrial companies, besides obtaining so much land that it would almost amount to an experiment in land nationalization. It does not seem as if the English people are likely to adopt so drastic a levy in the near future; but it may still be that Mr. Lawrence has indicated the road along which the financial re-organization will travel a few years later. It seems probable that the deflation of credit, which is so badly needed to bring down prices in England, can only take place through a considerable redemption of the national debt.

BALANCE OF THE GOLD STANDARD RESERVE IN INDIA AND
IN ENGLAND ON THE LAST DAY OF EACH MONTH

Held in the following form	31st August 1918	30th September 1918	31st October 1918
	£	£	£
1. Gold in India... ..	<i>Nil</i>	<i>Nil</i>	<i>Nil</i>
2. Cash placed by Sec. of State at short notice	7,069,819	6,001,209	6,000,563
3. British and Colonial securities (value as at 30th September 1918)	19,008,663	29,307,985	26,916,515
4. Securities since pur- chased (at cost price)	8,836,887	<i>Nil</i>	2,507,624
TOTAL ...	34,915,369	35,309,194	35,424,702

BALANCES HELD IN CASH IN THE GOVERNMENT CIVIL
TREASURIES AND AT CREDIT OF GOVERNMENT IN
THE PRESIDENCY BANKS AND THEIR BRANCHES—
BANK RATES—EXCHANGE—SILVER, ETC.

Year	31st August	30th September	31st October
	Rs.	Rs.	Rs.
1916	18,29,65,000	17,64,62,000	16,68,05,000
1917	26,46,92,000	20,76,43,000	18,58,08,000
1918	14,92,38,000	27,64,95,000	16,92,06,000

<i>Bank Rates</i>	31st August 1918	30th September 1918	31st October 1918
	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>
Bank of Bengal ...	5	5	5
Do. Bombay ...	6	6	6
Do. Madras ...	7	7	7
Do. England ...	5	5	5
<i>Exchange Rates</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
On Demand ...	1 6 $\frac{1}{16}$	1 6 $\frac{1}{16}$	1 6 $\frac{1}{16}$
Telegraphic Transfers ...	1 5 $\frac{3}{4}$	1 5 $\frac{3}{4}$	1 5 $\frac{3}{4}$
8 Months' ...	1 6 $\frac{7}{16}$	1 6 $\frac{7}{16}$	1 6 $\frac{3}{4}$
6 Months' ...	1 6 $\frac{3}{4}$	1 6 $\frac{3}{4}$	1 6 $\frac{3}{4}$
Government Paper (8 $\frac{1}{2}$ p.c.)	70 (30th August)	69-4 to 69-10	75-12 to 76-2
Bar Silver in London ...	49 $\frac{1}{2}$ d	49 $\frac{1}{2}$ d	49 $\frac{1}{2}$ d

BALANCE OF THE GOLD STANDARD RESERVE IN INDIA AND
IN ENGLAND ON THE LAST DAY OF EACH MONTH

Held in the following form	30th November 1918	31st December 1918	31st January 1919
	£	£	£
1. Gold in India ...	<i>Nil</i>	<i>Nil</i>	<i>Nil</i>
2. Cash placed by Sec. of State at short notice	6,025,935	6,000,637	6,016,044
3. British and Colonial securities (value as at 30th September 1918)	26,027,512	20,851,151	18,857,102
4. Securities since pur- chased (at cost price)	3,403,197	8,743,407	10,734,367
TOTAL ...	35,456,674	35,595,195	35,607,513

BALANCES HELD IN CASH IN THE GOVERNMENT CIVIL
TREASURIES AND AT CREDIT OF GOVERNMENT IN
THE PRESIDENCY BANKS AND THEIR BRANCHES—
BANK RATES—EXCHANGE —SILVER, ETC.

Year	30th November	31st December	31st January 1919
	Rs.	Rs.	Rs.
1916	15,53,87,000	14,59,72,000	16,49,29,000
1917	16,51,76,000	16,79,48,000	18,63,40,000
1918	13,68,41,000	14,67,65,000	22,87,44,000
1919			15,75,96,000

<i>Bank Rates</i>	28th November 1918 <i>per cent</i>	31st December 1918 <i>per cent</i>	31st January 1919 <i>per cent</i>
Bank of Bengal ...	6	6	7
Do. Bombay ...	6	6	7
Do. Madras ...	7	7	8
Do. England ...	5	5	5

<i>Exchange Rates</i>	s. d.	s. d.	s. d.
On Demand ...	1 6 $\frac{1}{2}$	1 6 $\frac{1}{16}$	1 6 $\frac{1}{2}$
Telegraphic Transfers ...	1 5 $\frac{1}{16}$	1 5 $\frac{3}{16}$	1 5 $\frac{3}{16}$
3 Months' ...	1 6 $\frac{1}{2}$	1 6 $\frac{1}{2}$	1 6 $\frac{1}{2}$
6 Months' ...	1 6 $\frac{2}{3}$	1 6 $\frac{2}{3}$	1 6 $\frac{2}{3}$
Government Paper (3 $\frac{1}{2}$ p.c.)	77 to 77-4	75-4 to 75-8 (2nd Jan.)	74-2 to 74-6
Bar Silver in London ...	48 $\frac{3}{4}$ d	48 $\frac{7}{16}$ d	48 $\frac{7}{16}$ d

ABSTRACT OF THE ACCOUNTS OF THE DEPARTMENT OF ISSUE
OF PAPER CURRENCY, 1918-19

	31st August 1918	30th September 1918	31st October 1918
	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>
Total amount of notes in circulation ¹	1,31,41;10,978	1,34,38;88,448	1,36,46;08,979
<i>Deduct</i> ² ...	<i>Nil</i>	<i>Nil</i>	3;12,846
RESERVE			
Coin and Bullion ...			
<i>In India :—</i>			
Silver coin ...	11,18;26,472	12,38;37,632	10,48;94,759
Gold coin and Bullion	20,32;85,789	20,38;10,903	20,40;74,312
Silver Bullion under coinage ...	7,66;44,071	7,54;19,302	9,08;92,381
<i>In England :—</i>			
Gold coin and Bullion	12;35,865	12;35,865	12;35,865
Silver Bullion held in the U.S.A. and in transit therefrom	6,12;19,000	7,96;28,500	10,32;86,000
Securities (at pur- chase price) :—			
Held in India ...	9,99;99,946	9,99;99,946	9,99;99,946
Held in England ...	75,99;14,835	75,99;06,300	75,99;12,870
Total Reserve ...	1,31,41;25,978	1,34,38;88,448	1,36,42;96,133
<i>Deduct</i> ³ ...	15,000	<i>Nil</i>	<i>Nil</i>
Net Total Reserve ...	1,31,41;10,978	1,34,38;88,448	1,36,42;96,133

1 Figures to the left of the semi-colon indicate the number of *lakhs*.

2 *Deduct*—withdrawn from circulation by Foreign circles, and in course of remittance to circles of Issue.

3 *Deduct*—Amount due on Bills drawn by one circle on another.

ABSTRACT OF THE ACCOUNTS OF THE DEPARTMENT OF ISSUE
OF PAPER CURRENCY, 1918-19

	30th November 1918	31st December 1918	31st January 1919
	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>
Total amount of notes in circulation ¹	1,41,04;16,133	1,48,00;20,294	1,50,69;13,175
<i>Deduct</i> ² ...	28;37,725	91;29,955	95;24,566
RESERVE			
Coin and Bullion ...			
<i>In India :—</i>			
Silver Coin ...	8,47;74,160	10,56;28,434	11,58;33,155
Gold coin and Bullion	20,44;63,015	19,68;00,139	18,91;20,153
Silver Bullion under coinage ...	12,48;59,767	12,83;40,330	8,37;22,445
<i>In England :—</i>			
Gold coin and Bullion	12;35,865	12;35,865	12;35,865 27;00,000 ⁴
Silver Bullion held in the U.S.A. and in transit therefrom	13,23;38,185	8,73;68,185	11,89;78,185
Securities (at purchase price) :—			
Held in India ...	9,99;99,946	12,65;99,946	16,07;99,946
Held in England ...	75,99;07,470	82,49;17,440	82,49;98,861
Total Reserve ...	1,40,75;78,408	1,47,08;90,339	1,49,78;88,610
<i>Deduct</i> ³ ...	<i>Nil</i>	<i>Nil</i>	<i>Nil</i>
Net Total Reserve ...	1,40,75;78,408	1,47,08;90,339	1,49,78;88,610

1 Figures to the left of the semi-colon indicate the numbers of *lakhs*.

2 Deduct—Withdrawn from circulation by Foreign circles and in course of remittance to circles of Issue.

3 Deduct—Amount due on Bills drawn by one circle on another.

4 Silver Bullion in transit between India, England and His Majesty's Dominion

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SEPTEMBER, 1918

I. ARTICLES—

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*An Estimate of the Capital Wealth of the United
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The Taxation of Luxury, by R. LENNARD.

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INDIAN JOURNAL OF ECONOMICS

Vol. III—Part 2

PROSPERITY AND DEBT IN THE PUNJAB

M. C. DARLING, I.C.S.

LATELY OFFICIATING REGISTRAR OF CO-OPERATIVE
SOCIETIES, PUNJAB

It has been said that nowhere in the world will you find a prosperous and contented peasantry. A perusal of the Land Revenue Reports of the last 15 years suggests that the Punjab is perhaps the exception that proves the rule. But this was not always so. Twenty years ago things agrarian provoked deep anxiety and clashing views. The agriculturist was losing his hold upon the land. Indebtedness was increasing. The area redeemed was always less than the area mortgaged; and the money-lender was master of the situation. At last, in 1901,¹ after much enquiry and searching of heart, when even the Revenue pundits had nothing more to say, the bull was taken by the horns and the Land Alienation Act was passed. This Act has rightly been termed the Magna Carta of the cultivator. To him it is the only Act that matters. He can no longer be ousted from his land, and he is no longer as wax

¹ The Act came into force in 1902.

in the hands of the usurer. With it too has come a new era of prosperity. The price of land, in spite of the Act's restrictions, has doubled. In some areas it has increased fourfold. Credit has expanded, prices have risen and a widely extended system of irrigation has made famine well nigh impossible. Finally, and this is a point that all official reports stress, since the Act came into force the area redeemed has almost invariably exceeded the area mortgaged. Prosperity therefore reigns, and the Revenue expert, no longer anxious, sees his work that it is good. Such is the impression made by the official reports and reviews of the last 15 years. It is a picture almost without shadow, and it must be admitted that such pictures are apt to be unreal; but then it is a picture of prosperity, and in the imagination at least prosperity has no serious shadows.

Turning now to the statistical statements that accompany the official reports we are suddenly confronted by the unexpected fact that throughout this period indebtedness has steadily increased.¹ In 15 years (1903 to 1917) the net increase in the mortgage debt of the Province exceeds 10 crores of rupees. Of this nearly 9½ crores falls upon owners and shareholders. Dividing the 15 years into periods of five years each, the figures in lakhs are as follows:—

	<i>Rs. lakhs</i>
1903-7 ...	161
1908-12 ...	231
1913 ² -17 ...	541

I have excluded the amounts for which tenants are responsible, as this article will deal exclusively with owners and share-holders. It will be seen that

¹ Some deduction must be made on account of mortgages which at the end of a fixed period are automatically extinguished, but informal enquiry suggests that in most districts this form of mortgage is uncommon.

² Figures for the year 1917-18 were not available when this article was written.

there is a rapid rise in the figures of the last 5 years. If indeed only the last three years are taken, the increase is startling, being nearly 4 crores of rupees. This is actually more than the amount for three years immediately preceding the introduction of the Land Alienation Act when the increase was only 3.11 crores.¹ This is the more striking as two years of the earlier period were years of famine and only one was a good year, whereas of the last three years the worst (1916) is officially described as 'unfavorable' while the last (1915) is called "a record year".

It is curious that so remarkable an economic phenomenon as this steadily increasing indebtedness,² vitally affecting the condition of over 3½ million proprietors, should have passed almost unnoticed. Indeed diligent search through the official reports of 20 years has discovered only one or two allusions to the fact that the money borrowed by mortgage exceeds the amount discharged by redemption. Yet for over 20 years this has invariably happened. In 1896 it was admitted that indebtedness was rapidly increasing, but after that there is no further reference till 1910. In that year the redemption of 415,000 acres for 2 crores and the mortgage of a much smaller area for 2½ crores is cited as evidence of the increased value of land. The more important point that it is also evidence of increased indebtedness is ignored. In 1913 there is a final allusion. In that year net mortgage debt rose by over 72 lakhs. The fact is recorded, but without comment. On the other hand throughout this period there are innumerable references to the fact that the area redeemed exceeds the area mortgaged and again and again, with almost ritualistic repetition,

¹ North West Frontier province excluded.

² Some deduction must be made from the figures given above on account of mortgages to non-agriculturists, which under the Land Alienation Act are automatically extinguished after 20 years without payment. Informal inquiry however suggests that the deduction to be made on this account is small.

the subject is made matter for congratulation. Doubtless acreage is an important consideration, but after all the prime object of a mortgage is money. If more and more money is raised by mortgage, the fact that at the same time the area under mortgage is decreasing does not justify unmixed congratulation. The official review of 1915 remarks that "it is very satisfactory to find that not only the proportion, but the actual area, of land under mortgage is now less than in any year of which we have a record." Yet in this year net mortgage indebtedness increased by well over a crore of rupees. In the following year the increase is 140 lakhs, the highest figure ever recorded for the Province. Turning to the year's report for some explanation of this we find the bare statement that "it is the first time in the last five years that the area mortgaged has exceeded the area redeemed". In 1917¹ the last year under report, the increase is only two lakhs less. This time we are promised an investigation, not however because for 20 years debt has steadily increased, but because, for the second year running the area mortgaged exceeds the area redeemed.

In this connection there is a further point to note. Recent enquiries into the indebtedness of members of co-operative societies in the Punjab, who may be regarded as typical of the proprietors of the Province, suggest that one rupee of mortgage debt means at least another rupee of unsecured debt as well: that is to say, that to estimate total indebtedness the mortgage debt should be doubled. This would mean that during the last five years the total indebtedness of owners and shareholders has increased by eleven crores, or over £7,000,000. For ten years the figures would be well over

¹This article was written in November 1918. The report for the year 1918 is, however, no exception to what has been said above. Net mortgage debt in 1918 appears to have increased by over 150 lakhs making a total increase of 430 lakhs for the last three years (1916-18).

£10,000,000.¹ In 1896 Sir Frederick Nicholson estimated the total debt of the Madras Presidency, which in population is now twice as big as the Punjab, at £20,000,000. An increase of £10,000,000, in ten years is therefore considerable, and the more surprising that the period is one of undoubted prosperity. It would seem that after all prosperity had its shadow, and that perhaps in India prosperity and debt go hand in hand. - Before we come to any conclusion upon the subject, however, we must try and ascertain why indebtedness has increased.

In the face of the almost total silence of the official reports this must naturally be a matter of considerable difficulty. Statistical statements are indeed the only guide. There are plenty of these. Their name in fact is Legion; but as a guide they have something of the erratic nature of the first possessor of that name. It is not only that all statistics may easily mislead; but these in particular have been collected for a purpose which is quite different from ours and under conditions which are constantly changing. Thus in the last twenty years two new Provinces have been carved out of the Punjab, the North West Frontier in 1900, and Delhi in 1912. Allowances too have to be made for changes in district boundaries, and a final difficulty is the elusiveness of certain statements which occasionally disappear from one report to reappear in another. The field of Indian economics resembles a vast jungle through which as yet there is no pukka road, but only tortuous and not very obvious paths. It was therefore a temptation at this point to draw back and leave it to those more expert in statistics and economics to align the road. This attitude, however, never led to either adventure or discovery. I have therefore ventured, hoping that others may be tempted to follow in

¹ The exchange is taken at 1s. 4d. At 2s. the amounts would be £11,000,000 £15,000,000 respectively.

my track, and that so doing they may find the path less tortuous or at least more obvious than before.

The first point to note is that in the last five years, with the unimportant exception of Simla, every district in the Province shows an increase in net mortgage debt, and even in the preceeding five years, when the increase was much less, only four¹ districts show a decrease, which too is no more than a total of 6½ lakhs. It is clear therefore that the increase in debt is widespread, though in the North-Western Districts it is less marked than elsewhere.

There are 28 districts in the Province, and as it is impossible within the narrow compass of an article to examine the conditions prevailing in each, I propose to take the worst cases, in the hope that where the malady is most pronounced the symptoms may be most evident. There are no fewer than nine districts, representing about one-third of the Punjab, in which during the last five years the increase in mortgage debt exceeds 20 lakhs. The figures, which are in lakhs of rupees, are as follows; and to show the rate of increase figures for the preceding five years are given as well:—

		1908-12	1913-17	Total.
		Rs.	Rs.	Rs.
Ferozepore	...	34,75	76,34	111,09
Amritsar	...	29,08	49,22	78,30
Sialkot	...	16,56	37,65	54,21
Lahore	...	21,43	28,29	49,72
Gurdaspur	...	14,05	31,68	45,73
Lyallpur	...	1,13	43,38	44,51
Hoshiarpur	...	12	29,13	41,12
Ludhiana	...	17,09	22,87	39,96
Jullundar	...	1,87	26,06	27,93

As there will be frequent references to these districts, a word may be said about each. Three of them, Sialkot, Gurdaspur and Hoshiarpur, are sub-

¹ Gujranwala, Montgomery, Multan, and Dera-Ghazi-Khan.

montane districts, highly cultivated, thickly populated and blessed with a good rainfall. Jullundur, Amritsar and Lahore belong to the Central Punjab, and are the home of the Sikh Jat, an excellent cultivator if somewhat extravagant in habit. Like the sub-montane districts they are highly cultivated, but being more irrigated are even more densely populated. The connection between irrigation and population is worth noting. Ludhiana is south of the Sutlej, and broadly speaking resembles the central districts, enjoying however less irrigation, but more rain. These districts are the home of the small proprietor whose average cultivated holding varies from 10 acres in Lahore to $3\frac{1}{2}$ acres in Jullundur. Excluding Lahore, the maximum average is only 6 acres. There remain the two districts of Ferozepore and Lyallpur. In these areas cultivated holdings are for the most part larger, the average being 15 acres in Ferozepore and nearly 20 in Lyallpur. In Ferozepore large holdings prevail because the rainfall is too scanty to permit of a large population. Lyallpur is too well known to need description. It is of course the most famous of the Punjab Canal colonies. On the whole these nine districts are typical of economic conditions in the Punjab, which is a province of small proprietors, with here and there a district of larger holdings. In only one district out of the 28 (namely, Hissar) does the average cultivated holding exceed 20 acres, and in 19 it is less than 8 acres. For the whole Province the average is $7\frac{1}{2}$ acres.

The district that shows the greatest increase in mortgage debt is Ferozepore. In ten years it has risen by over a crore of rupees. In two other districts, Amritsar and Sialkot, the increase exceeds 50 lakhs. Assuming, as before, that total indebtedness is not less than double the mortgage debt, we find

that as many as eight districts each show an increase of over £500,000.¹ In Ferozepore the amount is nearly £1,500,000.² As there are in the district about 150,000 owners and shareholders, this means an average increase of £10, or Rs. 150, per head, which, as money counts in India, is considerable. A report³ of 1908 touches upon the subject, and though it is not very recent it is worth quoting as, so far as can be discovered, it is the only explanation of the increase in debt that the reports for the last 20 years offer for any part of the Punjab. "Owing", says the Deputy Commissioner of Ferozepore "to the habit of excessive drinking in some cases and to gambling in others the people mortgage their lands first to one, then to another for increased consideration, and again to a third person for a further increase during the course of the same year; and this fact alone accounts for the high figures under the head mortgage and redemption of mortgage." And he goes on to point out that at the same time a combination of good harvests and high prices for grain had led to an abnormal rise in the value of land, the implication being that this sudden access of prosperity in facilitating mortgage had led to an increase in debt. Here then prosperity and debt would appear to be intimately connected, and what is more serious, to have led to demoralizing⁴ habits. As such the case is a warning to those superficial economists who regard material prosperity as the remedy of all evil. It would be unwise, of course, to apply this instance from a single district to the whole Province. At the same

¹ 75 p. c. must be added at present exchange (2s. 4d.).

² Further enquiry suggests that Ferozepore is an exception to the general rule, that total debt is not less than double the mortgage debt. The latter appears in this district to be much heavier than unsecured debt. Even so the increase can hardly be less than 1½ crores, which at present exchange is equal to £1,500,000 (September, 1919).

³ Land Alienation Act Report.

⁴ The Assessment Reports of the district (1912-14) also speak of "extravagance and dissipation" as prominent causes of debt.

time the fact that in the district which shows the most abnormal increase of debt the phenomenon has been connected with demoralizing habits, shows the importance of the subject and the need of enquiring into the phenomenon as a whole.

Ordinarily, where small proprietors are concerned, the main causes of indebtedness are: (1) bad seasons, (2) increase of population without a corresponding increase in production, (3) expansion of cultivation, (4) splitting up of holdings, (5) purchase of land on credit, (6) high prices, and (7) facile credit. There are other causes such as intensive agriculture, which demands more capital, and the power of the usurer; but for our present purpose these can be ignored, as intensive agriculture in the modern sense hardly yet exists, while the usurer is hardly ever absent. Thanks to the establishment of nearly 6000 Co-operative Credit Societies his power in the Punjab is decidedly less than it was 10 years ago, so that we can hardly look to him for an explanation of the rise in debt. To ascertain this we must now examine each of the causes given above as briefly as such complicated questions allow.

Bad Seasons

The first cause is bad seasons, or to speak more accurately, though less simply, seasonal vicissitudes, as it is not only the bad seasons that run the cultivator into debt, but also their great fluctuations. In India, outside the great irrigated areas, the harvest is a gamble in rain, and this produces the gambler's habits. The Indian cultivator, therefore, is not noted for thrift. Moreover when holdings are small, even a moderate harvest may compel a man to borrow, and if interest is high it may be difficult to pay off the debt in a good harvest. The moderate harvest occurs more

frequently than is supposed. Even in districts with a good rainfall like Gurdaspur and Sialkot, the rain is apt to come at the wrong time or in too great abundance, with the result that there may be a succession of harvests none of which will be good and none positively bad. This has certainly been the case in Gurdaspur, and has probably had much to do with the increase of 32 lakhs in the mortgage debt of the district during the last five years. The small owner there is not a man of business. In a good year he lives well. In a poor year he borrows; and this, owing to the high value of his land, he can do with ease. Looking to the Province as a whole, however, we find that the harvests of the last ten years have been above the average. There have been no years of famine as in the nineties, and only two bad years, while four were definitely good, and one, as we have seen, was a record year. The remaining three were normal or slightly below normal. Accordingly, though a few individual districts may have suffered, we can hardly attribute the increase in debt throughout the Province to the seasons.

Increase of Population

Of the many causes of poverty which operate in a country like India increase of population is the most serious, because where agriculture is stagnant mouths increase faster than food; and when agriculture is the only important industry few leave the village where they were born. The common attitude therefore which sees in an increase of population a sign of well-being is fundamentally wrong. It can only be an advantage if production, agricultural or industrial, outstrips it; and even then, so far as industrial production is concerned, it is a doubtful blessing, as it leads inevitably to overcrowded towns at

home, and a struggle for markets abroad, and the latter as often as not ends in war. It was not therefore necessarily matter for regret that the last census disclosed a substantial decline in the population of the Punjab. The fact was of course deplored. Attention was concentrated upon the ravages of malaria and plague, and the economic advantage of a smaller population for the land to sustain was not considered. In the nineties both population and indebtedness rose considerably. I have little doubt that the one affected the other; and in view of the great increase in debt during the last five years, I would hazard the guess that the population is no longer declining¹ but almost certainly increasing. At the same time the fact that throughout the period of the last census indebtedness was slowly but surely increasing shows that there are other causes at work.

Splitting up of Holdings

In a country where the laws of inheritance prescribe equal division of property between sons, an inevitable result of an increase of population is the splitting up of holdings, and when these are small this is likely to be a potent cause of debt. In 1896 an exhaustive enquiry into indebtedness in four different areas was undertaken by Mr. Thorburn, Commissioner of Rawal Pindi. In his illuminating report, which deserves to be republished, he says that the four most prominent causes of debt are fluctuations in yields, losses in cattle, the obligation to pay land revenue whatever the harvest, and the splitting up of holdings from the growth of population. The first two causes are really aspects of seasonal vicissitudes which have already been considered; and if one may judge by the

¹ Since this was written the mortality figures of the influenza epidemic of the autumn of 1918 have been published, showing a death rate of 5 per cent of the population. This would probably falsify the guess made above.

Assessment Reports of the last ten years, land revenue is no longer a serious cause of debt. There remains the splitting up of holdings. Official statistics show that there are now 136,000 more owners and shareholders and 53,000 more holdings than five years ago. The increase in the case of the former is about 4 per cent. Each of the nine districts which we are specially considering shows a similar tendency; and in five, Lahore, Gurdaspur, Hoshiarpur, Jullundur, and Lyallpur, the provincial average is exceeded. In spite of a great expansion of cultivation, the effects of which will be discussed presently, the increase in shareholders has naturally led to a reduction in holdings. This has occurred in each of the nine districts in question. In the six in which the average holding is less than 7 acres the reduction varies from half to a quarter of an acre. For the Province as a whole the average has fallen from 8 to $7\frac{1}{2}$ acres. In itself this is perhaps not a change of much importance; but viewed as a continuing process it is one that may deeply affect the future welfare of the Punjab. Meanwhile there can be little doubt in at least seven out of the nine districts (in Lyallpur and in part of Ferozepore the average holding is still large enough to bear reduction) the splitting up of holdings has been a cause of the increase of debt. The fact that the number of owners and the amount of debt have both increased more rapidly in most of these districts than in others, is at least presumptive evidence of this. In Jullundur, indeed, where there are nearly 10,000 more owners and shareholders than five years ago, and where the cultivated area has shrunk by 13,000 acres, it has probably been the determining factor, and perhaps explains why the increase in debt should have leapt up from less than two lakhs in the first half of the last decade to 26 lakhs in the last five years.

Expansion of Cultivation

Jullundur is one of the very few districts in which the cultivated area has declined. For the whole Punjab the last five years show an increase of over a million acres or $3\frac{1}{4}$ per cent. Much the greater part of this is due to the extension of canal irrigation. For canal cultivation more capital is needed than for dry. It is reasonable therefore to suppose that borrowing has taken place on this account. The effect of this upon an increase of debt may however be exaggerated. Thus none of the five¹ districts in which the expansion of cultivation exceeds 10 per cent shows a remarkable increase of debt. Two of these, Mianwali and Dera Ghazi Khan, both Indus Districts, while together adding 200,000 acres to their cultivated area, have not added more than 20 lakhs to their debt, which works out to Rs.10 per acre. Moreover, in none of the districts in which debt has risen most has the expansion exceeded 4 per cent. In three of them the addition to cultivation is insignificant; and in one, Jullundur, there has been, as we have seen, a decrease. It would, therefore, be unwise to attach much importance to this factor. So far, however, as debt is due to an expansion of cultivation, it need not be regretted as it is productive debt.

Purchase of Land on Credit

There is nothing dearer to the peasant proprietor than land. It is the alpha and omega of his life, and his only means of sustaining it. In a striking passage Mill says "When the habits of a people are such that their increase is never checked but by the impossibility of obtaining a bare support, and when

¹ Montgomery (39 p.c.) Multan (15 p.c.) Gujranwala (13 p.c.) Mianwali (12 p.c.) D. Ghazi-Khan (10 $\frac{1}{4}$ p.c.)

this support can only be obtained from land, all stipulations and agreements respecting the amount of rent are nominal. The competition for land makes the tenants undertake to pay more than it is possible they should pay." *Mutatis mutandis* this applies as much to the price of land as to its rent, and is one explanation why in the Punjab its price has more than doubled during the last 20 years. In the East the primary value of land is social rather than commercial. It is one of the three things for which money is always forthcoming. The other two of course are a marriage and a case in the courts. All three are a common source of debt. We must however distinguish between the man who borrows to buy land which will yield enough to pay back both principal and interest and the man who borrows to buy it at an inflated price. The former is thoroughly business-like, but the latter is very much the reverse. Now that the price of land is abnormally high borrowing to buy must in nine cases out of ten be thoroughly unprofitable. The purchase of land may, therefore, be an important cause of debt. On the other hand, as land is generally sold by one cultivator to another, it may be argued that the loss of the one being the other's gain the net result upon total indebtedness should not be much affected. This would be truer if loans were repaid as readily as they are taken. Thus when, as must often happen, land is sold to meet a debt, part of the price paid is probably retained for current expenses. If at the same time the purchaser has borrowed to buy, debt will increase more on the one side than it is reduced on the other. If this is correct we should expect to find the rise in indebtedness during the last five years accompanied by a rise in sales. This indeed is exactly what has happened. In the five years ending with 1912

land was sold for $7\frac{1}{2}$ crores, and in the last five years for 12 crores. There is therefore a rise of $4\frac{1}{2}$ crores, or an increase of 60 per cent. Turning to the figures for our nine districts we find the same feature. Lyallpur is the most striking case. In the earlier period land was sold for 48 lakhs and mortgage debt increased by only one lakh, whereas for the last five years the figures are respectively 95 lakhs for sales and 43 lakhs increase of debt. The two are undoubtedly connected, and in the Civil Justice Report of 1912 we read that "the acquisition of proprietary rights has left some of the Lyallpur zamindars short of ready money and they have sold or mortgaged their newly gained proprietary rights and decamped with the proceeds leaving debts behind them." In Ferozepore too a larger amount of land has been sold during the last ten years than in almost any district in the Province, and, as we have seen, there is no district in which indebtedness has increased more rapidly. On the other hand large amounts of land have been sold in Multan and Gujranwala which are not amongst our nine districts. Even in them, however, mortgage indebtedness has risen substantially during the last five years, the increase in each case being over 10 lakhs. It may therefore be concluded that land purchase and debt are connected, but the connexion is probably less marked in districts where money is plentiful.

High Prices

We come now to high prices. It is commonly assumed that they are good for the cultivator, as indeed they are if he has more to sell than to buy, but if it is the other way round, he benefits no more than any other class of consumer. In India a man with 20 or 30 acres will often have more to sell than to

buy, and if his land is secured against bad harvests by irrigation high prices are an obvious advantage. The canal colonies have felt this to the full as is shown by the large amounts of gold which they continually absorb. But in districts where the average cultivated holding is six acres or less it is only in years of good harvests that there is much surplus grain to sell, while in years of bad or unfavorable harvests, for part of the year at least, grain will probably be bought rather than sold. Let us compare for a moment two districts as dissimilar as Gurdaspur and Hissar, the one submontane with a good rain-fall, the other officially described as 'arid' with a rainfall of less than 15 inches. Going from the one to the other is like passing from a wilderness into a garden. At worst Gurdaspur will always have some appearance of cultivation. In Hissar, on the other hand, in a bad year it is possible to ride for 50 miles and hardly see a green thing. Yet the surprising thing is that in Hissar the people are undeniably better off than in Gurdaspur. They are better housed, better clothed and probably better fed. Even at the end of a year which had given only $3\frac{1}{2}$ inches of rain most people in Hissar had grain enough left in their bins to live on. Yet in November, 1918, in Gurdaspur owing to a bad autumn harvest following upon a spring harvest which, though poor, was by no means a total failure, more people than not were buying grain (rice and maize) at Rs.5 a maund. The last and most telling point in the comparison is that debt in Gurdaspur is much higher than in Hissar. Thus if we take the Sirsa Tahsil of the latter and compare it with the Shakargarh Tahsil of the former, both being areas that are almost entirely dependent upon their rainfall, we find from enquiries recently made that in the Sirsa Tahsil the indebtedness of proprietors is

about ten times the land revenue, while in the submontane tahsil of Shakargarh the multiple is as much as 25. Further, in the former, 26 per cent of the proprietors are free of all debt, and in the latter only 3 per cent. One explanation of the difference is over-population, which neutralizes all the advantages of nature. Hissar, with a cultivated area of $2\frac{3}{4}$ million acres, has to support a population of only 850,000, whereas to feed a slightly smaller population (837,000) Gurdaspur has only 833,000 acres. In Hissar the average cultivated holding is 22 acres against 6 in Gurdaspur. In the former therefore a good year will produce a large surplus of grain which can either be stored against a bad year or be sold to great advantage. In Gurdaspur this is generally impossible. It is not surprising therefore that it is one of the most heavily indebted districts in the Punjab, and it is significant that the only district which is more heavily mortgaged is the adjoining district of Sialkot where conditions are similar. High prices combined with poor harvests have accentuated the evils of over-population. And in this connection it has to be remembered that while the cultivator sells in a cheap market, as a retail purchaser he buys in a dear one. Accordingly as a consumer he feels the full effect of a rise in price, but as a producer he cannot gain its full advantage unless sale is co-operatively organised. This may explain why the last three years, which have all been years of war and abnormal prices, have seen so startling an increase of debt.

Facile Credit

A recent American writer on rural economics says that "farmers who do not keep accurate accounts and who have not a keen sense of values should avoid the use of credit as they would the plague". This

is a counsel of perfection. All the world over the small proprietor, provident or improvident, must borrow. It is important therefore that his credit should be both cheap and good. So far as it is only cheap it is a danger. It is the primary object of co-operative credit to secure that when credit is cheap it shall also be good and when good that it shall also be cheap. Where however the cultivator is left to himself, his credit will more often be cheap than good. The high value of his land makes borrowing a matter of ease, and the more valuable it becomes the more he is tempted to borrow. It was this that made an official of the Central Provinces write in 1889—"the owners of the land grow poorer, while their land is daily rising in value." Pope expresses the same idea when he says:—

"The devil's grown wiser than before ;

He tempts by making rich, not making poor."

In the Punjab Mr. Thorburn, to whose report we have already alluded, traces the beginnings of serious indebtedness to the seventies, when it became an easy matter to alienate land. Since then its value has steadily increased, notably in the last ten years, during which the price of cultivated land has risen from Rs.75 an acre to Rs.186, a rise of 148 per cent. In the same period debt has also increased enormously, and the theory may be hazarded that in a country of uneducated small proprietors, unless credit is controlled, debt will always rise in close ratio to land value, that in fact debt follows credit. In Sir Frederick Nicholson's well known report on Co-operation we read that even in so thrifty and educated a country as Switzerland an abnormal rise in land values led to the peasant proprietors becoming much more indebted, which shows, as Sir Frederick says, that "even in countries of good education the peasant proprietor cannot refrain from

pledging any additional value which the land may acquire." The remark applies with double emphasis to India and its illiterate masses. To them a sudden rise in the value of land may be little short of a disaster. Yet official reports speak of it again and again as a matter for congratulation. Sir Bamfylde Fuller was nearer the mark when he wrote in 1889 that "money is practically never raised for the improvement of estates and in almost every case the cause of debt has been improvidence and ignorance, pure and simple. In such a case a fall in the value of land as a means of raising money is one of the best things that can happen." Applied to the Sikhs and Arains of the Punjab this is perhaps an over-statement. Over 14,000 wells, mostly masonry, have been sunk in the last five years. Several thousand improved implements have been sold, large tracts of waste land have been broken up, and there is evidence that in the more progressive districts the rudiments of improved agriculture are at last being grasped. But when all is said and done the money spent in this way probably represents but a very small part of the amount borrowed. While 14,000 wells have been sunk there has been an increase of 40,000 suits, many of which must have cost the litigant much more than the price of a new well. With a person so incurably litigious as the Punjabi it may be safely asserted that a substantial part of the money raised on the inflated value of land has been spent in the Law Courts. In the Civil Justice Report of 1913 the increase in the number and value of land suits in Gujranwala is definitely ascribed to the cupidity aroused by the rising value of land. The same report states that in Jullundur practically every alienation is challenged, and the local District Judge adds expressively "the Courts are the Monte Carlo of the peasant." That the con-

nexion between debt and litigation is close is shown by the fact that year after year more suits are instituted in Muzaffargarh, Gurdaspur and Sialkot, which are probably the three most heavily indebted districts in the Punjab, than in almost any other district in the Province. Hoshiarpur and Amritsar run them close, and both are more heavily mortgaged than most districts. There can be no doubt that debt often follows litigation, and in the Punjab it looks as if litigation followed credit, the one increasing as the other expands.

Another common source of debt is ceremonial expenditure, especially of course upon marriages. It is difficult to collect statistics to prove this, but most cultivators will tell you that marriage costs more than it did. Twenty years ago a peasant proprietor could get married for Rs.100. Now Rs.400 or Rs.500 will hardly cover it, while amongst the Sikhs of the central districts, where the rise in indebtedness has been most marked, it will cost from Rs.1,000 to Rs.2,000. I know of a Ziladar who, though Rs.6,000 in debt, spent Rs.5,000 on a daughter's wedding. And last cold weather I came across a member of a co-operative society who in 1916 spent Rs.1,300 in marrying a son and the following year Rs.400 in marrying a daughter. Together the two sums represented 17 years rental of his 10 acre holding. And at the time he already owed over Rs.1,500, most of which he had borrowed for a case. Instances of this kind are probably not uncommon, and they have doubtless multiplied since women became fewer than men. In short, borrowing for unproductive purposes is far too common in India.

We have now examined each of the seven causes to which the increase in indebtedness in the Punjab may be due. Superficial as the survey has been certain tentative conclusions emerge. In the first place two factors stand out prominently, the great expansion

of credit and the rise in prices. The former has probably operated throughout the Province, the latter wherever holdings are small. Secondly, with these two main causes are interwoven others the precise importance of which it is difficult to determine as they vary in effect from district to district. Lastly, it is clear that further enquiry is needed, and it should be detailed and systematic. Prosperity and debt are evidently intimately connected; and some of the accepted views in regard to the former would appear to need revision. If this is so, important consequences follow. One is that credit must be controlled. With a simple, uneducated and naturally improvident peasantry it is clearly dangerous to let people borrow as they please. As a servant credit can turn sand into gold, but as a master it will turn gold into sand. Restriction therefore is necessary, and co-operative credit is the obvious way of applying it, for members of a co-operative society cannot borrow at will. Moreover, through their society they learn the all-important lessons of punctual repayment, honest dealing and thrift. Co-operation is indeed the very negation of indebtedness. In the Jullundur district I calculate that ten years of co-operation have reduced the net indebtedness of 20,000 members by 25 lakhs. No effort therefore and no expense should be spared to extend co-operative credit to every village that can be induced to accept it. Incidentally too co-operation is the best remedy for high prices.

Underlying the whole question of indebtedness in the Punjab is the problem of small holdings. We have seen that they are getting smaller and that this process is likely to continue, that they cannot resist bad seasons and suffer from high prices, and that in stimulating a demand for land they lead to its purchase on credit at an inflated value. The evil is clear but the remedy is difficult. The laws of in-

heritance can hardly be changed, nor is the Punjab well adapted to industries which would provide a subsidiary means of subsistence. The latter indeed need not be regretted, for no one who is acquainted with industrial conditions in India could wish the relatively healthy life of the country to be exchanged for the demoralizing influences of the town. There remain only two remedies. One is the improvement of agriculture so that production may keep pace with population, and the other is the encouragement of emigration. A good start with the former has been made by the Agricultural Department, but India is still far behind America and Western Europe in the effort made. Moreover there are limits to what can be done, as small holdings and advanced agriculture do not agree very well together; and in India the difficulty is accentuated by the climate which saps all desire for improvement. The alternative remedy, emigration, is therefore important. Before the war the Punjabi was more and more going to America and the Far East, and though he often returned a wealthy man—some have brought back nearly a lakh—he was not always a better man for the change. The war has happily provided an ideal colony for the future. In Mesopotamia, with its somewhat better climate than the Punjab, the sturdy qualities of our peasant proprietors should reach their fullest development. It is to be hoped, therefore, that this will not be lost sight of in the reconstruction that will follow peace with Turkey. The rural Punjab deserves well of its rulers; and as the only martial province in India, anything that threatens its welfare is of more than usual importance. At present it is undoubtedly prosperous, but prosperity has brought debt. This anomaly should if possible be removed.×

A STUDY OF THE INDIAN FOOD PROBLEM

(CONCLUSION FROM LAST NUMBER)

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The Average Supply

In the previous portion of this paper the total requirements of grains in British India for food, cattle and seed were ascertained; and the total available supply after correcting the figures of gross out-turn by allowances for wastage, and for imports and exports, was calculated. To bring the figures of total supply (see p. 110 above) in conformity with actual fact, however, or in other words to find the quantity actually available for consumption and other purposes, it is necessary to make an allowance for the amount carried over to the next year when the harvest turns out good in a particular year. I think if we assume that two-thirds of the excess over the average supply is carried over to the next year it will serve our purpose. To determine the average supply the total supplies of all seven years are added together and the sum divided by seven. The result gives the average supply of the middle

year (1914-15). It amounts to 55.22 million tons. If the quantity is annually increased by 0.5 per cent (the rate of the natural growth of population in British India during the period 1901—1911) for the last three years, and decreased by the same rate for the first three years, the results give the average supply for each year. The average supply thus calculated stands as follows:—

			<i>Millions of tons</i>
1911—12	...	...	54.41
1912—13	...	...	54.68
1913—14	...	...	54.95
1914—15	...	...	55.22
1915—16	...	...	55.50
1916—17	...	...	55.78
1917—18	...	...	56.06

On comparing the above figures with those of the total supply, it will be seen that the total supply falls short of the average supply in the following years to the following extent:—

	<i>Millions of tons</i>	<i>Percentage</i>
1912—13	2.52	4.6
1913—14	6.49	11.8
1914—15	1.18	2.1

And the total supply exceeds the average supply in the following years as follows:—

			<i>Millions of tons</i>
1911—12	...	...	1.18
1915—16	...	...	2.46
1916—17	...	...	4.74
1917—18	...	...	1.74

Quantity of food-grains actually available for use

If we carry over the two-thirds of the excess of food-grains over the average supply of each of the

above four years to their respective next years we get the quantity actually available for consumption and other purposes. In the case of the remaining years, the total supply of each of these years represents the quantity available for use. The quantity thus calculated stands as follows:—

			<i>Millions of tons</i>
1911—12	...	...	54.80
1912—13	...	...	52.95
1913—14	...	...	48.46
1914—15	...	...	54.04
1915—16	...	...	56.32
1916—17	...	...	57.90
1917—18	...	...	58.06

The Deficit

The figures for the total requirements of food-grains and the final total supply available for consumption and other purposes are placed side by side, and the reader will be surprised to find that there is a big deficit every year as given in column 4 below:—

In millions of tons

Year	Total Requirements	Final total supply available for use	Deficit
1	2	3	4
1911—12	64.33	54.80	9.53
1912—13	63.60	52.95	10.65
1913—14	63.03	48.46	14.57
1914—15	65.16	54.04	11.12
1915—16	65.83	56.32	9.51
1916—17	66.19	57.90	8.29
1917—18	66.40	58.06	8.34

Quantity of Food-grains consumed by Well-fed Classes

It will greatly help us in correctly understanding the consequences of this deficit if we determine the quantity of food-grains consumed by those classes of the people who are always well fed, i.e., by those who, for one reason or another, are always in a position to get the quantity sufficient to maintain them in health and strength. In the absence of any definite information regarding the number of such people, only a rough estimate of their number can, at present, be made. Broadly speaking the population of British India falls under two main classes—

(a) Agricultural,

(b) Non-agricultural.

In the agricultural classes, I think, all the malguzars and proprietors of land who primarily live on the income from the rent of agricultural land, and the rich cultivators of the canal irrigated areas of the Punjab and U. P. are well above the starvation level, and they may be taken to be always well fed. Amongst the non-agricultural classes, I think, those whose family annual income is above Rs. 500 will ordinarily fall in the well-fed class. Now let us estimate the number of such people. From the Census Report of 1911 it will be seen that the number of those people and their dependents who were living on income from rents of agricultural land was 5,467,000. The Canal Colonies reports, and the Annual Reports on Irrigation in India, unfortunately do not give the number of people living in all the Canal Colonies of the Punjab, and so in the absence of any definite information, it will be better to assume that 75 per cent of the ordinary cultivators and their dependents living in the canal irrigated areas are above the starvation level. From a map showing the canal irrigated

areas of the Punjab it is easy to know the portions of the districts which are thus irrigated, and from the Census Report of the Punjab the number of ordinary cultivators and their dependents living in these parts can be approximately found. The number of ordinary cultivators and their dependents in these areas of the Punjab in 1911 was 3,151,000, and so the number of those cultivators who may be taken as always well-fed comes to 2.36 million. The number of such people in the canal irrigated areas of the United Provinces may be taken to be 0.5 million.

Now we turn to find the number of well-fed people in the non-agricultural classes. The income tax statistics as given in the *Statistics of British India*, Volume II, clearly show the number of those people whose family annual income is above Rs.1,000. In 1911 the number of such assesseees was only 289,826. But we have also to find the number of those people of non-agricultural classes whose annual family income is between Rs.500 and Rs.1,000. Before 1903-04 the income tax was also levied on all those persons of non-agricultural classes, whose family income was more than Rs.500 per annum, and so we know the number of assesseees whose income was between Rs.500 and Rs.1,000 in 1902-03.¹ It was 324,044. If we assume that the increase in the number of families with an income between Rs.500 and Rs.1,000 during the period 1902-03 to 1911-12 was exactly in the same proportion as in the case of those in the next higher class, i.e., of those with an income between Rs.1,000 and Rs.1,250, during the same period, a calculation gives the number of families with an annual income between Rs.500 and Rs.1,000 in 1911-12 as 550,200. Undoubtedly the rate of increase in the case of families

¹ See *Statistics of British India for 1911-12 and Preceding Years* (Sixth Issue); Part IV (b)—Finance and Revenue, p. 161. (Government Press, Calcutta).

with an income between Rs. 500 and Rs. 1,000 would have been somewhat greater, and it is just possible that many families may have escaped assessment in 1902-03, but for our rough estimation the above number will serve our purpose well. So the number of non-agricultural families with an annual income above Rs. 500 in 1911 was 840,026. As the average population per house according to the census of 1911 was 4.9, the total number of non-agricultural people whose family income was more than Rs. 500 was $(840,026 \times 4.9)$ 4.12 million.

We find, therefore, that the total number of those people who may be taken to have been always well fed in 1911-12 was as follows:—

<i>Agricultural :—</i>	<i>Millions</i>
(i) Those who live on rent from agricultural land	5.47
(ii) Rich cultivators and their dependents in the canal irrigated areas of the Punjab	2.36
(iii) Rich cultivators and their dependents in the canal irrigated areas of U. P.	0.50
<i>Non-agricultural :—</i>	
(iv) Number of people whose family annual income was above Rs. 500	4.12
Total ...	<hr/> 12.45 <hr/>

As the total population in British India in 1911-12 was 244.3 million it will be seen that only a little more than 5 per cent of the people can be included in the well-fed classes in 1911, and therefore for the period under inquiry I assume that 5 per cent of the people were always well-fed, and so the quantity of food-grains consumed by them works out as follows:—

<i>Millions of tons</i>			
1911—12	...	...	2.42
1912—13	...	...	2.43
1913—14	...	...	2.45
1914—15	...	...	2.46
1915—16	...	...	2.47
1916—17	...	...	2.48
1917—18	...	...	2.50

But in the above calculation we have not taken into consideration one important fact that the children of every class are generally well fed. People will themselves starve, but will not allow their children to starve as far as they can; and therefore, if we assume that 80 per cent of the children between the ages 1 to 15 of the classes not included above, are generally well fed, the quantity of food grains consumed by them will stand as follows:—

<i>Millions of tons</i>			
1911—12	...	...	8.02
1912—13	...	...	8.06
1913—14	...	...	8.10
1914—15	...	...	8.14
1915—16	...	...	8.18
1916—17	...	...	8.22
1917—18	...	...	8.26

Adding the above quantity consumed by 80 per cent of the children to the quantity consumed by the well fed rich classes we find the total quantity of food-grains consumed by all well fed people, and it is as follows:—

<i>Millions of tons</i>			
1911—12	...	..	10.44
1912—13	...	...	10.49
1913—14	...	...	10.55
1914—15	...	...	10.60
1915—16	...	...	10.65
1916—17	...	...	10.70
1917—18	...	...	10.76

*Percentage of the total Requirement of Food-grains
left for the remaining population*

We have seen that 12.45 million people are ordinarily well fed in British India; and of the total number of 82.4 million children (between 1 and 15) of the remaining population, 80 per cent, *i. e.*, 65.89 million are also well-fed; and as the number of children of ages between 0 and 1 is 8 millions, so the total number of people who might be taken to be always well fed in British India in 1911-12 was 86.34 million, and therefore the remaining population of British India, *i. e.*, 156.96 million, or 64.6 per cent of the whole population, is likely to be directly affected by the deficit. Now let us see what percentage of their requirement of food-grains

In Millions of tons

Year	Number of people directly affected by the deficit.	Requirement of the people in column 2	The deficit	Quantity of food- grains actually available.	Percentage of the quantity avail- able to the mini- mum quantity required.
1	2	3	4	5	6
1911—12	156.96	38.02	9.53	28.42	75
1912—13	157.74	38.21	10.65	27.56	72
1913—14	158.33	38.39	14.57	23.82	62
1914—15	159.32	38.58	11.12	27.46	71
1915—16	160.11	38.78	9.57	29.27	75
1916—17	160.91	38.98	8.29	30.69	79
1917—18	161.71	39.17	8.34	30.83	79
		Average :	10.3		73

was available to them during different years of the period. If we subtract the total quantity of food-grains consumed by the well-fed classes from the total requirements for human consumption, we get the quantity of food-grains required by the remaining people,

assuming them to get sufficient to maintain them in health and strength. If we further subtract the previously ascertained deficit from these requirements we get the quantity actually available for their consumption. From the figures of the quantity actually available for their consumption, the percentage of the quantity available to the quantity required can easily be calculated. It is worked out in the table printed on the foregoing page.

Remarks on various possible Bases of Calculation

Before I conclude, a few words may be said about the various methods of calculation that have been employed in the above study. I am very much obliged to Lieut.-Colonel G. I. Davys, of the Military Food Laboratory, Kasauli, and Mrs. Davys, for giving me various suggestions in this connection. I am fully conscious of the fact that in the calculation of the requirement of food-grains for human consumption I have assumed that all food-grains are of equal food value which in fact is not correct.

The average requirements of food-grains to keep a man in health and strength can also be calculated in the following other two ways: (i) by finding out the daily requirements of protein, fats, carbohydrates, and salts; (ii) by estimating the calories required by the average man per day, and then finding out the caloric value of the food-grains that are available for human consumption.

Both these methods are open to one objection or the other. It is just possible that a certain food-grain, say a millet, may have great caloric value but may have little nourishing or sustaining power, while a substance rich in protein, fats or other salts may have comparatively less caloric value; and so these methods if employed separately will give results which

are not likely to agree. Lieut.-Colonel Davys has suggested to me to use the caloric method as a control for the comparison of results. I could not, unfortunately, get the figures of the caloric value of more than three or four Indian food-grains; and so I could not accurately calculate the requirements of food-grains for human consumption by this scientific method. At first sight it appeared that the jail diet was in excess of requirements, but from my existing information on the subject I find that there appears to be a close agreement in the final results obtained by the two methods; and I hope to establish the point much more clearly when I get full information.

It has been suggested to me that the poor people get a greater quantity of vegetables than is given to prisoners in jails; and that rich people take a greater quantity of sugar, oil, and *ghi* as substitutes, and so some reduction ought to have been made in their requirements of food-grains. Now we know that the jails of the Central Provinces allow 3 *chhataks* of vegetables per head per day, and in the United Provinces jails only one *chhatak* is allowed. In my opinion, an allowance of 3 *chhataks* per day, even in the case of poor people, will represent quite a fair standard; and if poor people take more than 3 *chhataks* a day, I consider it to be the direct result of the deficit of food-grains, because I think these poor people are compelled to depend upon a greater quantity of vegetables, through not being in a position to get the necessary amount of food-grains.

In the case of rich people I have taken the question of substitutes into consideration in the determination of the probable degree of error. It may, however, be noted that the question of substitutes cannot influence our final results to any appreciable degree, firstly because the number of rich people is estimated

to be only about 5 per cent of the whole population, and secondly because the substitutes would not reduce their requirements of food-grains to any great extent. This will be apparent from a comparison of the standard adopted for the inquiry with the daily ration for Indian troops (combatants) and Indian followers of the Indian Army, the information about which I obtained through Prof. Jevons, after the first portion of this article was already in the press. The diet scale of Indian soldiers may well be considered as an ideal ration for full efficiency and may be assumed to represent the requirements of well fed classes, while the Indian followers may be assumed to live on a little more than a subsistence diet. The rations for Indian troops (combatant) and followers are as follows:—

	<i>For Indian Troops</i> ¹	<i>For Indian Followers</i> ²
	<i>ozs.</i>	<i>ozs.</i>
<i>Atta or Rice</i>	24	24
<i>Dal</i>	3	4
<i>Ghi</i>	2	1
<i>Gur</i>	2	...
<i>Potatoes</i>	2	...
<i>Salt</i>	$\frac{1}{2}$	$\frac{2}{3}$
<i>Fire wood</i>	48	...

and the substitutes allowed are as follows³:—

<i>Article short issued</i>	<i>Substitute</i>
<i>ozs.</i>	<i>ozs.</i>
<i>Ghi</i> 1	Dressed meat (mutton or goat) 4
	or
	Cooking oil 2
<i>Gur</i> 1	Sugar 1

From the above we see that in the Indian Army an Indian soldier is given 27 ounces of food-grains,

¹ Army Tables, Miscellaneous Services, Part I., Table 15, as reconstructed by July Appendix to L.A.O.—1918.

² Army Tables, Miscellaneous Services, Part I., Table 16. Note 2.

³ Army Instruction (India) No. 407, dated 30-4-1918.

and an Indian follower is given 28 ounces of food-grains, and this compares very closely with the standard of 28 ounces adopted for the inquiry.

Lieut.-Colonel Davys thinks that the reduction of the food-grain allowance by $6\frac{1}{4}$ per cent for meat eggs and fish is too high, and he suggests a reduction of 5 per cent only. I have taken this point into consideration in the investigation of the probable degree of error. He further thinks that the wastage is put very high. As has been already noted, there are various items which can be included under the term wastage; and it is practically impossible to calculate the exact amount of wastage in the case of each one of them. In a Resolution dealing with the measures to be adopted for the extirpation of bubonic plague, issued by the Government of India, and published in the Gazette of India dated 21st August 1920, it is estimated that in British India alone the number of black rats is 375 millions, and that the quantity of grain devoured by them in the course of a year amounts to about one million tons. It will be seen that this estimated wastage by black rats alone amounts to nearly 1.5 per cent of the annual average production of all the food-grains in India.

I have seriously thought over the whole question of wastage once again, and I feel that there is no over-estimation in my assumption of 10 per cent as the wastage from all causes. Notwithstanding this, in the investigation in the next section of the probable tendencies to error, I have, however, made allowance for a probable slight over-estimation of the wastage.

*Consideration of the Probable Tendency of the
errors in our Calculations*

Now we turn to the problem of considering briefly the extent of the probable amount of error in our

calculations. It may, however, be noted that the errors are of such a nature that they cannot even be estimated with any approach to accuracy, so we can only show in what way they tend to influence our final result. They may be treated under the following two heads:—

- (i) those which affect the estimate of the yearly deficit of food-grains.
- (ii) those which affect the percentage of the quantity available to the calculated quantity required by the residuum (64.6 per cent) of the population.

These are shown separately in Appendices I and II. From Appendix I, it will be seen that in the calculation of the deficit there are ten sources of error, and the majority of them tend to make the calculated deficit more than the actual one. All these errors, however, should not be given equal importance; and I feel that the resulting error cannot be more than two or three per cent; and so it will be quite apparent that the big deficit shown every year is not at all fictitious, and it is fairly correct even from the statistical point of view.

This very slight overestimation of the deficit tends to make the calculated percentage of the quantity available to the quantity required a little less than the actual one; but from Appendix II it will be seen that there is one more source of error which tends to make that percentage less, while two other sources of error are tending to make that percentage more than the actual one. I think, therefore, the effects of the slight overestimation of the deficit are greatly modified. Therefore, I think that the percentage of the quantity available to the quantity required by the residuum (64.6 per cent) of the population as calculated above may be taken to be fairly correct.

Conclusion

From the above study we are forced to the conclusion that even in the best year from an agricultural point of view (*i.e.*, 1916-17), and even with restricted exports of food-grains to foreign countries due to the war, so many as 160 millions of people in that year were in a position to get only 79 per cent of the coarsest kind of food-grains to maintain them in health and strength; and in a famine year (1913-14) the percentage fell to such a low figure as 62. Taking an average of all the seven years, it will be seen that 64.6 per cent of the population lives always on insufficient food, getting only about 73 per cent of the minimum requirement for maintaining efficiency. In other words, it clearly shows that two-thirds of the population always get only three-fourths of the amount of food-grains they should have.

It is just possible that one-third of the above number (two-thirds of the population) may be getting a little less than 90 per cent of their requirements; and the rest of the two thirds, or 100 million, inspite of hard labor, may be getting for a greater part of the year less than 60 per cent of food-grains that are given to the worst sort of criminals in the jails of the United Provinces and Central Provinces. This clearly shows the gravity of the situation in which we find ourselves. The country cannot make progress in any way while such a state of affairs continues.

The above conclusions are in full accord with the experience of those who have carefully observed the conditions of living of the Indian masses in their own villages; and they unmistakably show, as nothing else can, the urgent necessity of taking in hand immediately and in right earnest the problem of agricultural improvements along right lines, to help the Indian cultivator to raise two blades of corn where one grows now.

APPENDIX I

Finding out the Error in the Calculation of the Deficit

An error is called *positive* if it tends to make the calculated deficit less than the actual one.

An error is called *negative* if it tends to make the calculated deficit more than the actual one.

Error due to:—

*Whether
positive or
negative*

- | | |
|---|---|
| 1. Quantity of food-grains required by sick persons being less than that given in the Standard adopted for the inquiry. | — |
| 2. Quantity required of inferior kinds of food-grains consumed by poor people being more than that given in the Standard adopted for the inquiry. | + |
| 3. Assuming that one half of the population takes as much meat or fish as to reduce their requirement of food-grains by one-eighth during one year. (Lieut.-Colonel Davys suggests the reduction of 5 per cent for the whole population). | + |
| 4. Area reported for crops being less than the area for which population is reported. | — |
| 5. Taking the yield for the area for which yield figures are not available in the same proportion as those for which they are available. | + |
| 6. Taking 500 lbs as average yield per acre for 'other food-grains and pulses.' | — |
| 7. Probable very slight over-estimation of the wastage. | — |
| 8. Area reported under the crop being less than the actual one. | — |
| 9. Yield in bad years being very likely to be over-estimated. | + |
| 10. Yield in good years being very likely to be underestimated. | — |

APPENDIX II

Finding out the error in the final calculation of the percentage of the quantity of food-grains available to the quantity required by the residuum (64.6 per cent) of the population.

An error is called *positive* if it tends to make the calculated percentage less than the actual one.

An error is called *negative* if it tends to make the calculated percentage more than the actual one.

Error due to:—

*Whether
positive or
negative*

- | | |
|--|---|
| 1. Probable slight over-estimation of the deficit (result of Appendix I) | + |
| 2. Underestimation of the number of rich families earning between Rs. 500-1000 per annum (assuming all rich families consume full allowance.) ¹ | — |
| 3. Omitting the number of rich 'ordinary cultivations' of India from other parts of the country except the Punjab and the United Provinces. ¹ | — |
| 4. Not making proper allowance for vegetables, oil and <i>ghi</i> taken as substitutes by rich people, and the consequent reduction of their requirement of food-grains. | + |

¹ The number of persons in the residuum will undoubtedly be less in the case of Nos. 2 and 3.

THE SUBSTITUTION OF SILVER FOR GOLD IN THE CURRENCY OF SOUTH INDIA

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The fact that a gold currency was formerly in use in South India has often been alleged as an argument in favor of the possibility of maintaining a gold currency in India to-day. However, those who have quoted this example have in reality had very few facts regarding it at their disposal. I believe it to be the case that the more closely this early gold currency is examined, the less evident will become its value as an argument for establishing a gold currency to-day. One will find it distinguished by the same characteristics in the 18th century as distinguished it before the War. Then, as now, it demanded a relatively large import in order to maintain a relatively small volume in circulation.

On the Coromandel Coast, the precious metals were, in the 18th century, obtained entirely, or almost entirely, by foreign trade. The principal share was derived from Europe in payment for the piece-goods which formed the staple export to the West. The remainder came from the various regions with which the coast was connected by the country trade. Both silver and gold came from Manilla, which obtained the first from America and the second from China. A certain

quantity of gold dust was brought from the islands of the Indian Archipelago. The European trade to China produced occasional exports of gold from Canton to Madras, Pondicherry, and Negapatam, when the price of tea and silk was too high to permit returns being made to Europe in those commodities. And finally silver, which had found its way overland from Europe, was imported from Jeddah and the Red Sea. But it is not possible, until the close of the century, to form any estimate of either the volume of these imports or the ratio of imported gold to silver.

One fact, however, stands out from this mass of uncertainty. Silver was tending to replace gold as the principal export from Europe to the Coast. In the 17th century gold had been the more regular and constant export from the West. Thus in 1647 dollars gave a loss of 7 per cent, while gold yielded a profit of $13\frac{1}{2}$ per cent¹. Ten years later we read that *reals* and all kinds of silver were in low esteem.² Another ten years and we are told that in Governor Langhorne's time dollars had exchanged at so low a rate as 20 for 10 pagodas.³ However in the last quarter of that century silver rose considerably in value. In 1681 dollars sold at $16\frac{1}{2}$, and in 1682 at $15\frac{5}{8}$ for 10 pagodas.⁴ And although heavy imports of dollars by the English temporarily reduced the rate, in 1690 rupees were quoted at a price which was equivalent to $12\frac{3}{4}$ dollars per 10 pagodas. This last value was not maintained for long; but in 1700 Lockyer reckoned the dollar at 15,⁵ and this rate continued approximately constant for the next forty years. Silver was imported steadily by the French and English; and

¹ Foster's *English Factories in India*, Vol. viii, p. 165.

² Love's *Vestiges of Old Madras*, Vol. i. p. 194.

³ *Records of Fort St. George*—Despatches from England, 1681-86, pp. 78-79.

⁴ *Loc. cit.*

⁵ Lockyer, *The Trade to India*.

it is interesting to note that the former had to sell almost all their imports at Madras, as in those days that place was an important financial centre, where all the bankers of note kept representatives. I do not find that the French ever realised less than a rate of about $16\frac{1}{2}$, or more than $14\frac{1}{2}$. They certainly averaged 15 dollars per 10 pagodas.¹

This stability of rates was, however, illusive. Silver was really depreciating, but the fact was concealed by a progressive debasement of the pagoda. In the Carnatic about this time there are said to have been 22 mints under the Nawab. Besides these, the English had mints at Madras and St. David's; the French at Pondicherry; and the Dutch at Negapatam and Pulicat. In the 17th century these issued a great variety of coins, indeed in more than one case numismatists have been unable to determine what exactly constituted the coins the names of which have survived. But in spite of this, there is reason for supposing that all the pagodas circulating in the south of the peninsula differed but little amongst themselves. At all events, there were two principal types coined: the one for circulation in the Carnatic, and the other for use in the countries to the Northward, later known to us as the Northern Circars. For a century or so after our arrival on the Coromandel Coast, the standard of these coins seems to have been well-maintained; at all events we find no complaints of the variation of the standard. However, from about the year 1720, the Nawab's mints began to issue coins of a lower touch than had been customary. Their fineness had been $86\frac{1}{2}$ per cent. In 1722 this fell to 85; and in 1724 to $84\frac{1}{2}$ per cent. By 1731 it had been reduced to $83\frac{1}{2}$; in 1736 it had fallen to barely 80, and before 1740

¹ See the valuable volumes of the proceedings of the *Conseil Supérieur* of Pondicherry, published by the *Société de l'Histoire de l'Inde Française*.

to 77 and in some cases still lower. Roughly speaking, we may say that in the twenty years 1720-1739 the Carnatic pagoda was diminished in value by over 12 per cent.¹

This greatly inconvenienced the European nations established on the Coast. Their chief bullion import was silver, which was really falling in value, so that it realised no more of the debased pagodas than it had done of the standard pagodas of an earlier date, while the cloth which they wished to buy had risen in proportion to the fall in value of the circulating coin. Each nation therefore endeavored to prohibit the currency of these country pagodas within their limits, and attempted to maintain the standard by continuing to issue coins of the old fineness. But each found, very naturally, that their coinage simply disappeared as fast as it was issued. As the French Council wrote a little later, "On receiving gold, the Malabars (*i.e.* the Tamils) always carry it to the mint that will give them most pagodas. Many have been re-coined at Alambarai, Villupuram and Wandiwash; and both at Pondicherry and Madras, people collect old pagodas in order to re-coin them."²

We do not know the precise action taken by the Dutch, except that they prohibited for a time the currency of pagodas of less than a certain degree of fineness.³ But regarding the French we have more information. In 1737, on representations of the merchants that, unless the Pondicherry standard was lowered, they would be obliged to carry their gold elsewhere, the fineness of the Pondicherry or Crescent pagoda was substantially reduce.⁴ In the next year, when the standard of the country mints had fallen below 80

¹ Letter from the French Company to Pondicherry, dated August 21, 1739, with the answer *en apostille* of October 13, 1740. (Pondicherry Records, No. 28).

² Pondicherry to Madras, May 25, 1738 (Pondicherry Records, No. 13).

³ Pondicherry to Karikal, September 13, 1740 (*ibid.*).

⁴ Conseil Supérieur, March 20, 1737 (vol. iii, p. 78).

per cent, all merchants were forbidden to receive or pay out pagodas worse than 80½ per cent fine, and all pagodas below that were to be re-coined. At the same time a quantity of poor coin received in payment for silver was ordered to be reminted.¹ In 1739 the English plan was imitated, the standard was fixed at 80 per cent fine, but coins not worse than 77½ per cent might circulate at 4 per cent discount.² However these regulations must have been very ineffective. In the two years previous, the French had coined only 170,000 pagodas, while these had been received at only the same rate as the debased country pagodas, and had immediately disappeared from circulation.³

Meanwhile the English had succeeded in establishing a standard coin. Their first effort was a failure, probably owing to their having tried, like the French and Dutch, to prevent the baser coins from passing from hand to hand. But the second attempt was better judged. The great shroffs, who were bankers rather than mere money-changers, supported the scheme. A coin, 80 per cent fine, was established as the standard, called the Star pagoda from the large five-pointed star stamped on its rounded side; but other species were to circulate at their bullion value. The only special mint-regulation seems to have been the suspension of the ½ per cent charged as mintage-duty.⁴ The new coin at once rose to a premium over the country pagoda. As early as 1742 the English Council was able to report the complete success of the scheme. The Star pagoda was eagerly demanded even in so distant a cloth-weaving centre as Salem, and the Nawab was rumoured to be about to raise his coin to the same standard as that of the English.⁵ Two

¹ *Conseil Supérieur*, May 6, 1738 (vol. iii, p. 139).

² *Ibid.*, May 11, 1739 (vol. iii, p. 203).

³ *Ibid.*, August 26, 1739 (vol. iii, p. 238).

⁴ Despatch from Madras to the Company, February, 1742.

⁵ *Ibid.*, and Madras to the Company, February 15, 1745.

or three attempts were actually made to do so; but the Nawab's mints did not command great confidence and the efforts were not maintained. Meanwhile the Star pagoda established itself as the principal variety of pagoda in circulation. In 1746 we find it preferred to the Crescent pagoda;¹ and when Godeheu reached the Coast in 1754, he had to deplore the popularity of the English coin, even in the French settlement itself.²

However, with that perversity which seems especially attached to currency history, the appearance of the Star pagoda coincided with the first premonitory symptom of that conversion of the currency from gold to silver which is our principal subject. About 1740 there were three types of coin in use in the Carnatic and the Southern countries dependent on it. The best-known of these, and that in which all large wholesale transactions were conducted, was the pagoda, the history of which we have been tracing. These were often sealed up in bags of 1,000, which are said to have sometimes passed from merchant to merchant for years without being opened. Nevertheless this was not the common coin of the people. That was a small gold piece of heavily alloyed metal, called emphatically in the language of the country the *fanam*, i. e., money. These varied much from place to place. At Golconda they went 12 to the pagoda, at Porto Novo and in the extreme South 18, at Pulicat and Pondicherry 24, at Madras 36. Everywhere these formed the coin of retail transactions. When the merchants made advances to the weavers in pagodas, the latter made haste to exchange these inconveniently large coins—they may roughly be reckoned at 8s. sterling—for the *fanams* with which they bought

¹ Diary of Ananda Ranga Pillai, vol. iii, p. 224.

² *Mémoire sour le sieur Godeheu*, Piece no. 2.

their yarn and daily supplies of food.¹ Beside these, there was yet another coin in circulation. This was the rupee, which had only been introduced in the Carnatic when the Moghals established themselves there at the end of the 17th and the beginning of the 18th century. As we shall see, this was not in extensive use; but it must have been found in considerable numbers in the principal Muhammadan centres, such as Arcot, and, a little later, Trichinopoly. It was used, I conjecture, chiefly in the payment of the troops maintained by the Nawab. Part of the "country" revenues seem to have been received in it; thus in 1750 the revenues of Trichinopoly were reckoned partly in grain and partly in rupees; the revenue of the temple at Tirupati was paid partly in rupees and partly in pagodas; and, when the English rented out the revenues of Madura and Tinnivelly, a little later, the rent was calculated in lakhs of rupees. But in the middle of the 18th century the rupee certainly was not in general use, and there were many districts where it did not pass current.

However about this time both the French and English made attempts to establish it as the standard coin for their trade. Ever since the 17th century the English had minted a special coin called the Madras rupee, for export to Bengal. By 1740 the three European nations, English, French, and Dutch, had secured the privilege of coining the Arcot rupee; and had actually produced this specie in considerable quantities. But this was less for local use than with the object of avoiding the delays and disputes incident to using the Nawab's mints in Bengal, to which province all alike sent great quantities of silver. Thus it was natural that when they were involved in

¹ They seem frequently to have received their advances in fanams, e.g. at Salem (Fort St. David to Madras, October 26, 1741).

difficulties by the debasement of the gold circulation, they should try to avoid their difficulties by substituting the silver coin.

Accordingly in 1739 the French Council resolved that rupees should be current at the rate of 320 per 100 pagodas.¹ But this at once involved them in worse difficulties than ever. The market-rate on the Coast was at this time seldom under 350; and while the measure must have been very acceptable to all debtors, creditors were exceedingly averse to it. Besides, the cloth-merchants were never willing to accept advances for cloth in any money but pagodas; so the Company's business was impeded. When these obstacles were reported in France, the Company recommended that silver should be sent to China, to be exchanged for gold;² but the Pondicherry Government never seems to have had enough funds at its disposal to do so on any effective scale. Ten years later Dupleix was still reporting the great difficulty of getting the merchants to accept rupees—at Karikal they were demanding 370 or 380 per 100 pagodas³ and desiring an annual supply of at least 200,000 pagodas a year in gold, which he does not seem to have obtained.⁴

In spite of all difficulties, the English had been able to maintain their gold payments till a much later date. In 1744 there had been a heavy drain of gold to Bengal, where the Maratha raids had set a premium on the more precious and easily concealed metal.⁵ But it was not until the War of the Austrian Succession and the capture of Madras in 1746, that their supplies of gold began to fail. After the

¹ Conseil Supérieur, July, 15, 1739 (vol. iii, p. 224).

² French Company to Pondicherry, November 25, 1741.

³ Pondicherry to the Company, September 20, 1759.

⁴ Dupleix to the Company, October 3, 1750.

⁵ Madras Consultations, July 9, 1744.

latter event the English at Fort St. David could hardly find enough gold to pay their garrison; and after the heavy expenditure in which they were involved by the siege of Pondicherry in 1748, they too succumbed to silver. In 1749 it was announced that rupees were to be current in the English settlement at 350 per 100 pagodas.¹ This was an undervaluation of gold, similar to that of the French in 1739. It was accentuated by the coming of Nasir Jang from the North in the following year, for his army was paid in rupees, so that this specie became commoner and cheaper than ever.² When it became evident that the maintenance of the rupee currency would involve a great rise in prices, it was determined to restore the pagoda.³ In December, 1750, the English Council wrote home for a supply of gold from China and resolved that all the receipts and payments of the Company's Treasury should be made in pagodas.⁴ However the receipts did not equal the outgoings, and in the following March, there was not enough gold in the Treasury to pay the troops, so that the Council was reduced to the expensive necessity of selling rupees for what they would fetch.⁵ After this luckily the situation eased down. Gold was imported, and rupees, which in 1750 had been as low as 400, had risen by 1756 to 364 per 100 pagodas.⁶

Thus the attempts of both French and English to establish the rupee in general circulation both failed. The chief reason probably was that their commerce was not extensive enough by itself to support a new standard of value, which was unpopular with the mass of the inhabitants, owing to its large fluctuations

¹ Fort St. David Consultations, April 25, 1749.

² Madras despatch to the Company, October 24, 1750.

³ Fort St. David Consultations, December 3, 1750.

⁴ *Ibid.*

⁵ Fort St. David Consultations, March 11, 1751.

⁶ Madras Mayor's Court Pleadings, 1767, f. 560.

both in pagodas and in fanams. But in spite of their failure, it is likely that the circulation of rupees increased appreciably about this time. I have already mentioned the flood of rupees which Nasir Jang's army let loose. But from this time until the fall of Pondicherry in 1761 the French and English kept large forces in the field, and, although soldiers' pay in garrison at this time was discharged in gold, their *batta*, or additional allowances in the field, was reckoned and paid in silver. A considerable quantity of rupees must therefore have been absorbed between 1750 and 1761 in exchange for provisions, forage, and cattle-hire.

These same years included another event which was to exercise a great influence on the currency position of the South. This was the establishment of the English as the predominant power in Bengal in 1757. It was as important financially as politically. From this event dates the reduction of the Company's bullion exports to India, and the commencement of the movement of gold and silver from Bengal to Madras. Till then the movement had been the other way. The commerce of Bengal with the Coast was conducted by sea. It consisted in the export from Bengal of silk, opium, sugar, and rice; and the returns had been made principally in the silver which came from Europe for the purchase of the Coast piece-goods. This was the circumstance which enabled South India to take large quantities of silver and yet refrain from using it as currency. But for this re-export of silver to Bengal, the value of silver on the Coast must have declined much more than it had actually done.

In consequence of the prolonged struggle with the French, the Company's finances at Madras became straitened, and the Nawab's debt rose high by the advances made on his account. These conditions were

exaggerated by the cessation of the Company's bullion exports, owing to the glowing accounts which Clive sent home of the great revenues of Bengal. In 1759 and again in 1760 the conduct of the campaign was dependent on the supplies of treasure received from Fort William. This was sent principally in silver, and was employed to meet the current expenses of the army, which in 1760 were reckoned at two lakhs of rupees a month. More silver was sent into circulation by coining the bullion which had been intended to provide the Company's investment in China.

The financial situation was similar in the next war—the First Mysore War. Financial help was again needed from the wealthy presidency of Bengal; but this time the assistance was afforded in gold. Clive's unfortunate scheme to establish a gold currency in Bengal had just failed, and the gold mohurs which he had coined were sent down to Madras to be re-issued as pagodas. In the years 1767 and 1768 7,80,000 pagodas were thus provided. The result well illustrates the sensitive nature of the Madras bullion market. In 1767 when there were no pagodas in the Treasury, the price of rupees was so low that the Council preferred borrowing pagodas at interest to issuing rupees at such unfavorable rates. But with the importation of gold from Bengal, the price dropped from 370 per 100 pagodas in 1768 to 320 in 1771; and even in the latter year silver continued very dear, in spite of considerable payments made to the Company by the Nawab in rupees.¹

In 1774-75 a certain amount of specie, principally gold, was exported to England on private account. This was due, not to the rapacious greed of individuals, but to the shortage of the normal forms of remittance

¹ Madras Public Consultations, October 5, 1767, f. 582; Jourdan to Dacot and Crauford, March 26, 1768; Verelst, p. 96. Rupees had dropped to 345 by August, 1768.

to England. Ever since the time of the famous Governor Pitt, these remittances had usually been made in diamonds. But about the year 1770 the supply seems suddenly to have dried up. The Company too had cut down the amount of money that might be remitted through its Treasury at Madras. A third method, the export of merchandise to Canton, where the proceeds were paid into the Company's cash for bills on England, had been completely stopped. At this time we find the whole circulation of the Carnatic estimated at below 20 lakhs of pagodas. The Nawab, possibly basing his opinion on the authority of the sowcars, put it at 15 lakhs; while a member of the Madras Council suggested 17 lakhs. But even when we remember the restricted area within which the active circulation was confined, this seems much too low. At the close of the century it was reckoned at 80 lakhs, and there had probably been small change in the volume.¹

I have not hitherto found evidence in support of the commonly accepted view, that such exports were regular and considerable.² But there were certainly other ways by which the currency of the Carnatic was constantly exposed to loss. This was by way of the inland trade into Mysore, the dominions of the Nizam, and the Northern Circars. The last two of these is capable of clearer definition than is the case with most currency phenomena of the period which we are discussing. We have already seen that two kinds of pagodas were coined in the South,—at Madras these were the Star pagoda, which circulated in the Carnatic and the adjacent districts; and the Madras pagoda, which circulated in the

¹ Madras Public Consultations, January 16 and 19, 1775; Public despatch to the Company, January, 25, 1775; Military Country Correspondence, 1775, ff. 25-26.

² Mr. Hamilton in his *Trade Relations between England and India* discusses this point.

Northern Circars and Hyderabad.¹ From 1767 onwards, with one trivial exception, none of the latter were coined on the Company's account, presumably because the cloth-investments in those regions were paid for out of the territorial revenues collected on the Company's account. Nevertheless these coins continued to be minted in surprising quantities for private merchants. For the ten years 1770-1779 the coinage of Madras pagodas averaged 2,24,000; in the ten years 1780-1789 it averaged 3,46,000. Altogether in these twenty years the total coinage of Madras pagodas by the English alone amounted to 60,71,000,² while that of Star pagodas was 90,80,000.³ The proportion was moreover higher even than these figures would suggest, for the Madras pagoda was worth 10 per cent more than the Star. If this is taken into account, it appears that of all the gold coined in these years at Madras, no less than 42 per cent was designed for export to the Circars and Hyderabad. Nor was there any return of coin or metal from those districts. While Madras imported from the Northward in considerable quantity cotton-cloth and grain, the first for re-export, the second for consumption, its returns in merchandise were small. The drain from Madras to Mysore, though not so distinguishable as that to the Northward, is well avouched by contemporaries.⁴ It probably was less considerable, perhaps a half. Altogether this internal drain at the lowest computation must be set at 4½ lakhs of Star Pagodas a year, of which five-sixths was gold. But besides

1 In 1767 it was determined to attempt to circulate Star pagodas in the Northern Circars. The Masulipatam merchants then said that it depended on the bankers at Hyderabad. Madras Public Consultations, January, 27, 1767, f. 32. The experiment came to nothing.

2 Identical coins were minted by the French and Dutch as well. The French coinage in the latter part of the century was inconsiderable; but the Dutch at this period were the largest importers of gold to the Carnatic.

3 See the figures in the appendix.

e.g., Petrie, who produced a valuable minute for the Committee of Reform, 1799.

this, deductions also have to be made for gold converted into ornaments. In 1799 this was estimated at a lakh of Star Pagodas a year. If we set it at a half of this, we have an annual average subtraction from the currency of the Carnatic of 5 lakhs of Star Pagodas, of which 4,50,000 was in gold.

This might very well continue so long as the normal imports sufficed to make the loss good. In the years we are considering, 1770-1790, this was certainly the case. The Carnatic obtained gold from two chief sources. The Dutch imported gold, derived from their Eastern trade, to the extent of 4 lakhs of pagodas a year.¹ Native merchants were believed to import about one lakh a year in gold dust from Achin and other places in the Archipelago. Portuguese vessels brought a small but uncertain quantity, perhaps half a lakh, from Macao. The imports thus sufficed to maintain the stock of gold in the Carnatic; but if anything should happen to interfere with them, evidently that stock would waste rapidly.

But although the stock of gold was being maintained for the moment, another change was going forward. Once gold had recovered from the effects of the import from Bengal in 1768-69, the price of silver remained pretty constantly in the neighborhood of 350 rupees per 100 pagodas until the year 1780. But then the outbreak of the Second Mysore War involved great expenditure. Considerable issues of rupees were made for current expenditure; and the price fell. In order to prevent any increase in the loss thus caused, at the close of the year, the Council gave orders that Arcot rupees should pass at 375 per 100 pagodas in payment of all sums under 300 pagodas. Within these limits rupees would be received at the Company's

¹ Petrie's minute *ut supra*. Cf. Milburn's *Oriental Commerce*, vol. i, p. 365.

Treasury.¹ This regulation might perhaps have succeeded, had it not been accompanied by heavy imports of silver; but it was as usual necessary for Bengal to supply the financial needs of Madras. This was done in silver; and before the end of the war rupees were down to 400 per 100 pagodas.² After a time this was somewhat corrected by imports of gold from Bengal.³ By May 1790, 6 lakhs of pagodas had been imported, and the rupee had risen; but in the following year 31 lakhs of rupees arrived, and the rupee relapsed to 383.⁴ On this the Council resolved to fix the exchange at 365, and to receive rupees into the Treasury at that rate. This resolve was only taken after consulting the principal merchants and shroffs, who unanimously approved of the measure and promised their full concurrence and support.⁵

This was on the face of it an over-valuation of the rupee. Within the immediate region of its influence, that is, in Madras itself, it can only have caused a withdrawal of pagodas from circulation and the substitution of rupees in their place. This tendency must have been strengthened too by the outbreak of the war with France in 1793, and the subsequent extension of hostilities to the Dutch. For this latter cut off the principal source of regular gold supply. While the drain inland continued unaffected, silver passed in Madras at more than its local gold rate, and at the same time the normal import of gold was materially reduced. The consequence necessarily was that the stock of gold in Madras and its immediate neighborhood was rapidly reduced, and the circulating coin came to consist more and more largely of silver. This tendency

¹ Madras G.O.G., December 31, 1780.

² Military Consultations, September 20, 1786, letter from Bengal.

³ A statement of the imports of treasure from Bengal between 1785-86 and 1798-99 occurs in the proceedings of the Committee of Reform, 1799.

⁴ Public Consultation, March 1, 1791.

⁵ *Loc. cit.*

was temporarily checked by the heavy exports of bullion and specie which political events imposed upon Mysore in 1792 and 1799; but as two-thirds of this seems to have been sent almost at once to answer private mercantile obligations in Bengal and China,¹ the effects can only have been transitory. Nor was the balance made good by the Government import of treasure from Bengal. In the ten years 1790-99 that only averaged 1,60,000 pagodas a year in gold, while the silver similarly imported averaged 5½ lakhs of rupees. Yet in spite of the shortage of gold and the considerable imports of silver, Government was able in 1797 further to enhance the value of the rupee by fixing the exchange at 350.² Some opposition was made to this; but as it was entirely ineffectual, I suppose that the money in circulation at Madras was principally silver. Indeed in the five years 1795-99 more than half the coin minted at Mādras was in rupees; and in the five years which followed more than three-quarters of it was silver; while the gold that was issued must have disappeared from circulation as rapidly as it would to-day. In 1806 we are told that while gold constituted the nominal standard at Madras, silver formed the currency.³

However the extreme looseness of the financial organisation, coupled with the economic conservatism of the people, seems to have permitted what would to-day be impossible. Silver was certainly overvalued at Madras; but it was at the same time undervalued in the districts. For example we are told in 1796 that in the Baramahal the tahsildars insisted on the revenue collections being made in rupees, which they kept themselves, paying pagodas into the Treasury instead. They are said to have gained 7 per cent on such

¹ Petrie's minute *ut supra*.

² Public Consultations, October 6, 1797, f. 3312.

³ Report of the Committee of Finance, ap. Public Consultations, 1806, ff. 425, etc.

transactions. The bazaar rate of exchange at Salem must therefore have been about 340.¹ About the same time we learn that, although rupees had a considerable currency in the Masulipatam district, yet the revenue was paid almost wholly in Madras pagodas.² Evidently the latter coin was undervalued at the official rate of exchange and was worth more locally. Even so late as 1818, the Madras pagoda was overvalued in the Circars, although by then rupees formed the main part of the currency elsewhere.³

We may take it, I think, that the local value of silver varied considerably from place to place. It was low in the Coast towns, and the immediately surrounding districts, on the southern half of the Madras Coast, because these were in immediate touch with foreign traffic and directly received the bullion, mostly silver, in which the exports were paid for. It was low, though somewhat higher, in the weaving centres, from which the Coast exports were drawn, and where some fifty years of pressure had induced the weavers to accept their advances in silver rupees, instead of insisting, as formerly, on pagodas or gold fanams. It was rarer and dearer in the other inland districts of the Carnatic (with probable exceptions at Arcot and Trichinopoly) where it only filtered through in driblets, in payment for their exports of surplus grain, either to weaving centres or to the Coast towns.

Nor was the system of collecting the revenues such as to tend with any force to a general levelling of conditions. At the close of the 18th century, the Company still only collected the revenues in the districts immediately around Madras, in the Northern Circars, and in certain districts ceded by Mysore in 1792, together with what was called the Poligar

¹ Munro to Read, January 20, 1796 (Baramahal Records).

² Pro. Board of Revenue, March 23, 1793.

³ Public consultations, April 24, 1818, No. 419.

Peshkash in the extreme south. In all these, except in the neighborhood of Madras itself, the fixed rate of exchange tended to keep gold, not silver, in circulation. At first this led to remittances of pagodas to Madras; and at the same time it was advantageous to send rupees out of Madras to districts where a profit could be made on the local difference between the bazaar and the Treasury rates of exchange. The Assumption of the Carnatic in 1802, which established English Treasuries all over the country, and thus multiplied the number of places where the Madras rate was obtainable, must have tended strongly to the general assimilation of conditions and the disappearance of these anomalies.

The Assumption of the Carnatic not only levelled down the price of silver in South India, but also led to a reform of the currency itself. One of the evils from which the country had suffered was a multiplicity of mints, issuing many different kinds of coin; and the first English collectors had to receive on account of the revenue at least 72 varieties of gold and 60 varieties of silver coin. Now that the only mints were English, there was no reason why so evident an inconvenience should be any longer tolerated. Accordingly it was resolved in 1806 that all these different varieties should be reduced to two—the Star pagoda and the Arcot rupee. This great and important reform was gradually carried out by a steady re-coinage spread over a period of nine or ten years.

Meanwhile the Company at home was exercised over the wider problem of Indian currency. In a circular letter to the three Presidencies in 1806 it dwelt on the inconvenience arising both to private persons and to the Company itself from the variety of coins in circulation, and discussed the possibility of establishing a uniform currency for all three Presi-

dencies. For this purpose it considered the rupee the most suitable coin, on account of the prevalence of that specie at Calcutta and Bombay; but at the same time it explicitly declared that it did not wish to discourage the circulation of gold, although, in accordance with the strict monometallism at that time becoming prevalent in England, it declared against establishing a legal rate of exchange between the two metals, as it could not be maintained and led only to loss. Gold coin might however be received at its bullion value.¹ The discussion was prolonged for ten years, and then in 1816 the Company announced its resolution to establish the rupee as the standard of value and the coin of account.²

In this, so far as Madras was concerned, it was doing little but recognise an accomplished fact. In 1812 the Mint Committee had observed that silver had already become the standard of value in the countries dependent on Madras³; and the only region which was mentioned as still possessing any considerable gold currency in 1818 was the Northern Circars. Even the troops stationed in the numerous district garrisons, whose payment in the latter part of the 18th century had caused endless troubles owing to fluctuations of the exchange of the various coins, had in 1816 long been paid in rupees;⁴ while the pagoda had become only a coin of account. In the years 1812-17 the total gold coinage at Madras only amounted to 2,50,000 pagodas a year,⁵ and this was the only source of gold supply for the Carnatic and the dependent districts. Fifty years earlier, the Madras mint alone had coined 6,00,000 or 7,00,000 pagodas a year; the Dutch had coined

¹ Public Despatch from England, April 25, 1806.

² Public Despatch from England, June 12, 1816.

³ Mint Committee's Report, April 12, 1812.

⁴ Public Consultations, January 7, 1818.

⁵ Parliamentary Return of 1864.

4,00,000; and the divers mints of the Nawab had issued a large though indeterminate quantity. Thus the gold coinage had shrunk certainly to less than a quarter, probably to less than a fifth, of its former volume; and it had long since fallen to the point at which the issues failed to make good the losses. When, then, in 1818 the rupee replaced the Star pagoda as the money of account, the change was but nominal.

Looking at the whole process broadly, we find it an interesting example of the operation of large causes, in which regulation counted for very little. In the 17th century the relative value of silver was much higher in India than in Europe; silver also formed the currency of Northern India, which then as now produced the bulk of the exports to the West. The European nations had thus every motive for buying those exports with silver rather than gold. However the Coromandel Coast formed an exception to these conditions. The existence of gold deposits in the South, though neither very rich nor very extensive, had in the first instance permitted the establishment of a gold currency. The trade with the Archipelago and China brought in enough gold to permit its maintenance, in spite of a steady drain northwards and inland. Then came the development of a considerable trade with Europe. At first the Coromandel cloth was bought mainly with gold imported from the West. But, as the volume of silver was accumulating in Europe much more rapidly than that of gold, and as the value of silver was tending to fall, the latter metal began to be sent in large regular quantities to the South as well as to the North. At first this involved considerable difficulties, partly obscured by the debasement of the normal currency of the country. Meanwhile the establishment of a Moghal subahdar at Arcot had led to the introduction of the rupee. This tendency was strengthened by the

SUBSTITUTION OF SILVER FOR GOLD 203

wars between the French and the English and between the English and Mysore. Up to 1793, however, the stock of gold in circulation in all probability had not absolutely declined, although it had fallen relatively to the volume of trade. After 1793, when the principal imports were cut off by the exclusion of Dutch commerce, and only replaced by spasmodic imports from Bengal, the stock began to waste by the drain inland. At this time the silver in circulation seems to have been distributed with great irregularity, and its value varied much from district to district. But this inequality was rapidly reduced by the influence of the district treasuries as soon as British administration was extended over the Carnatic in 1802. In these years the coinage of rupees, both on public and private account, was abnormally large. Thus the value of gold in silver gradually rose in the districts until it exceeded the rating which had been established at Madras. Once this overvaluation of gold had disappeared, the currency of gold was doomed. All the influences of convenience, the love of jewellery, the passion for hiding one's wealth, contributed to bring the Southern part of the peninsula into line with the richer Northern provinces. The gold which was sent into circulation thereafter—and certain quantities were coined and issued long after 1818—was liable to constant subtraction. It was, in fact, in much the same position as the sovereigns which circulated in India in 1913. In the East, as elsewhere, when both metals are unlimited legal tender gold can only be maintained in circulation by being overvalued as currency. The currency of gold at Madras vanished with the disappearance of that overrating.

COINAGE IN THE MADRAS MINT, 1767-1804
(000's omitted)

Year	GOLD					SILVER			TOTAL
	Madras Pagodas. ¹	Star pagodas			Total Gold in Star Pago-das. ²	Rupees			Coinage in Star pagodas ³
		Private	Coy.	Total		Private	Coy.	Total	
1767	171	268	43	312	500	609	254	863	750
1768	236	141	540	682	931	54	181	236	998
1769	307	20	413	433	750	116	34	151	793
1770	359	122	...	122	516	358	...	358	616
1771	240	...	179	179	430	840	...	840	670
1772	346	62	2	64	444	545	...	545	597
1773	217	526	...	526	763	445	...	445	890
1774	260	250	...	250	536	404	6	410	653
1775	358	249	...	249	642	253	...	253	714
1776	42	803	...	803	849	131	...	131	886
1777	38	653	...	653	704	220	55	275	783
1778	169	399	230	629	814	415	46	461	946
1779	217	254	228	482	720	160	...	160	769
1780	101	1152	53	1205	1316	256	265	521	1465
1781	259	254	295	549	823	172	1005	1177	1159
1782	489	...	726	726	1263	194	779	973	1544
1783	555	16	114	130	740	80	266	346	839
1784	434	21	189	210	742	285	273	558	899
1785 ⁴	...	...	...	...	...	...	...	...	...
1786 ⁵	185	270	...	270	473	123	29	152	516
1787	312	232	...	232	573	90	...	90	599
1788	310	191	...	191	522	95	...	95	549
1789	429	181	...	181	652	90	...	90	878
1790	93	242	408	651	753	266	1455	1721	1245
1791	144	215	516	731	889	323	8036	8359	3249
1792	368	124	781	905	1309	...	84	84	1333
1793	198	434	545	980	1197	270	...	270	1274
1794	117	148	107	256	384	418	...	418	503
1795	186	4	10	15	219	339	...	339	316
1796	143	2	224	227	384	232	...	232	464
1797	70	8	587	595	672	179	535	715	876
1798	78	17	228	245	330	869	2149	3019	1191
1799	301	6	217	223	554	63	4102	4165	1744
1800	416	...	...	...	447	530	1296	1827	950
1801	320	...	...	...	352	496	3435	3931	1475
1802	...	240	96	337	337	2394	1147	3542	1319
1803	...	253	281	534	534	3436	4784	8220	2880
1804	...	111	370	481	481	1796	4931	6727	2403

¹ All the Madras pagodas coined in these years, with one exception too trivial to be shown, were on private account.

² Madras pagodas valued at 10 per cent more than Stars.

³ The rupee is converted at 350 per 100 pagodas.

⁴ Accounts are missing for this year.

⁵ Accounts are available for eight months only of this year.

CLASSIFICATION OF THE ECONOMICS SECTION OF A LIBRARY

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The Library of the University of Allahabad was established in 1915, and the principle of arrangement adopted from the commencement was the grouping of books in Departmental Sections corresponding, so far as practicable, with the new departments of the University. The Professor in each subject was given control over his section of the University Library. The consequence of this is that the Professor was able to adopt that arrangement and classification of the books which seemed best adapted for the purposes of teaching and study. A further convenience for teaching and reserch work was an arrangement whereby each departmental section of the University Library might, to a large extent, be kept in the Seminar Room permanently allotted to the Department concerned, transfers of books being made from time to time, at the instance of the Professor, as between the main University Library and the portion kept in the Department.

A subject classification of the books was made the basis of the arrangement and numbering from the commencement. As regards the University Library

in general, it was decided to adopt the Dewey system in outline; but it was left to professors to make their own classifications in the subjects of their departments, if they so desired, such classifications to be capable of being fitted into the Dewey system.

It is well-known that the Dewey system is ill-adapted to the classification of an academic library of economics—the separation of commerce and communications (Dewey 380-389 and 656-659) from the main part of economics (Dewey 330-339), the absence of any adequate provision for economic history, and many other deficiencies, make that classification most unserviceable. It is particularly troublesome to the student of economics to find that related subjects in which he is interested, such as the law of rent, agriculture, and the history of these subjects, and studies of the grain trade, are scattered about in the library in four absolutely different places; and that there is no place whatever for rural economics, and social surveys.

There is, of course, no logical classification which will bring together all subjects in the groupings which would be most convenient for different readers. The Dewey system, and others of that character, may be very useful for public libraries, and are indeed fairly established. The needs of a University Library, however, are different; and, so far as I am aware, no general classification of books has yet been prepared for that purpose. The essence of such a classification for University purposes must be to group subjects and their subdivisions in the manner adopted for the purposes of teaching in the Universities. For convenience subjects are grouped in departments, each under the control of its Professor. These should be the major groups of the University Library classification; and in practice each might be designated by a letter. Within the Department, a numerical system

of classification can be adopted, being decimalised if necessary. The classification adopted for the Economics Section of the Allahabad University Library now to be described will illustrate what is meant.

The classification just mentioned is not a perfect example of the departmental system which I advocate; because it was necessary to have regard to the fact that it was decided to adopt the Dewey system for the main part of the University Library. It was necessary therefore that any departmental system of numbering should be made capable of being fitted into the Dewey system. The Dewey system allots the numbers 300 to 399 to what is broadly called Sociology, which covers a wide range of subjects from sociology, in the restricted sense, through economics (part of), education, international law, constitutional law and practice, and political philosophy, to ethnology, folk-lore, and the customs of war. I desired to divide the whole subject of economics as usually understood in Universities, and the scope of which may be judged from the Calendar of the London School of Economics, into 10 major divisions and 1,000 subdivisions. However, to secure symmetry in the library classification as a whole, it became necessary to include within my 1,000 subdivisions all the main subjects included by Dewey in this numbers 300 to 399. I therefore followed the plan of allotting comparatively less space to the non-economic groups. This is a admittedly a compromise plan; but under the circumstances it was the best that could be adopted.

This classification of the books on economics is not published with any idea of regarding it as a perfect model; for it has several imperfections which were only realised after the classification was in use and the books numbered, so that it was difficult to make any change. With all its imperfections, however, the

classification seems to be of some importance and interest both as a guide to students in exploring the very voluminous literature of economics and as a suggested basis for the arrangement of University and college libraries.

I am a great believer in the open-shelf system in all academic libraries; and hold that students should be freely admitted, under proper rules, to select books from the shelves themselves. It is impossible to overestimate the amount of real education which an earnest student may acquire for himself by dipping into many volumes on the shelves of a library, and at times by a diligent search in books, journals and pamphlets for theories and facts bearing on any subject in which he is interested or on which he is writing an essay. It is a very great advantage to the teacher also to have the books in his department classified into subdivisions based upon those which are naturally adopted in allotting subjects to lecture courses and subdividing the latter. When he has to prepare a lecture on any given subject, he may go straight to a given shelf and find together all the books in the Library dealing with his subject from a particular point of view. Many books have titles which do not correctly describe them, and books treating a subject from totally different standpoints may yet have titles practically the same, so that Librarians would without hesitation put them in the same subdivision. It is a fundamental condition of the classification here presented that books are classified according to subject-matter and their method of treating it, and not merely by their titles. The advantage of this to the lecturer is that he will not be worried by the presence of books which, though apparently rightly classified according to their titles, have in reality only a superficial relation to those subjects in which he is interested.

In compiling this classification I have drawn by way of suggestion largely on the classification adopted in the Library of the London School of Economics as published in its Calendar. However, after deciding on the main outlines of the classification, I found that the only practicable course was to construct the subdivisions by actual examination of the books themselves and tentative arrangement of them on the shelves. This proved to be highly illuminating and interesting work, if somewhat time-absorbing. I found that I had previously known comparatively little about economic literature and its numerous ramifications. This, I think, then is the value of the classification—that it is based upon an examination of a wide range of books in the English language, including many relating to India and a representative selection of those dealing with economic conditions in all parts of the world. The Library has only a few books in French, German and Italian and these mainly in economic theory, statistics and history.

It will be of advantage to review briefly the characteristics of the ten principal divisions into which the classification falls. The numbers and titles are as follows:—

001—099 SOCIOLOGY

This covers sociology (in restricted sense), social psychology, anthropology, ethnology and geography as viewed from the human and cultural standpoint. In this classification geography is not treated as a homogeneous subject, but as being auxiliary to the main divisions—sociology, economics, commerce, etc.

100—199 ECONOMICS

This group embraces all the theory of economics. It also includes all general economic treatises which have a theoretical treatment and are not merely descriptive; all works on economic history; all books on the theory of

statistics; and all works on economics or any part of it of a theoretical character or treating the science inductively or deductively.

200—299 SOCIAL ECONOMICS

This class contains all books of a general descriptive character dealing with the social conditions of the people, with pauperism and unemployment, and all forms of labor problems. Wages are dealt with here in a descriptive and statistical manner, the theoretical treatment being, of course, included in Economics (100-199). All works relating to labor problems, housing reform, town-planning, and co-operation also find their place here.

300—399 DESCRIPTIVE ECONOMICS

This section is entirely devoted to descriptive economics, excluding, however, transportation, and finance, currency and banking. Under the heading Descriptive Economics books describing every kind of industry find their place, and all engineering works other than those on transportation. Descriptive economics has two aspects: descriptive according to function, that is, usually by industry, or type of organization; and descriptive by place, that is a regional or geographical treatment. Prominence is given to both methods.

400—499 COMMUNICATIONS AND COMMERCE

Everything connected with roads, railways, canals, rivers, ocean navigation and posts and telegraphs, is included here; also all books on commerce, as the word is properly used—that is to say books describing the commercial activities of different regions or countries. Everything in the numbers 450 to 479 must have a geographical aspect. (For *commercial policy* see 530, *commercial practice and law* 630; for *commerce*, meaning trade in particular commodities, see 300-379 and for *history of commerce* see *economic history* 170, etc.)

500—599 FINANCE, CURRENCY AND BANKING

This covers the whole of public finance (except municipal finance, see 862), and private and joint-stock finance, banking, stock-exchanges, currency and commercial policy.

600—699 PRIVATE BUSINESS AND ADMINISTRATION

This class consists entirely of books of a practical character written for the use and guidance of persons engaged in the various occupations and not intended to be descriptive or scientific treatises on the various subjects. Thus, books describing how to manage a business, a works, or factory come here. In the interest of the study of economics, however, it is not always desirable to carry out this classification to logical completeness. For example, books dealing with the various operations of cotton or woollen mills ought to be put here, because they are written for the use of technical managers and designers. Yet such books are of service to the students of economics for purposes of information as to the nature of the technical processes and point of view of those engaged in the management. Such books are in fact "museum specimens" for the economist; and it is more convenient for him to find them ranged beside the frankly economic and descriptive works dealing with the same industries.

700—799 EDUCATION

This covers the whole ground of education from kindergarten to university standards, both in theory and practice, with subdivisions for descriptive accounts of education in various countries.

800—899 POLITICAL SCIENCE, ADMINISTRATION AND LAW

(This is printed only so far as political science and administration are concerned).

900--999 SOCIAL CUSTOMS

This deals with all kinds of social customs, such as those of costume and ornament, marriage, treatment of the dead, public ceremonies, recreations, legal and political status of women, folklore, nomadic races, proverbs, customs of war, etc.

If the foregoing explanation of the character of each class is carefully read and properly understood, it should not be difficult to classify any books according to this system.

It may be added that the numbering of the classification here printed is easily adaptable to fitting it into the Dewey decimal system. To effect this it is only necessary to put the figure 3 in front of every number in the present classification. Thus, 122 becomes 3122, which is more conveniently written 3 122, the space being left so as to call attention to the fact that it is an adaptation of the departmental classification. If it be desired to make the numbers similar in appearance to those of the Dewey system, it may be written 312.2. These means exactly the same thing; but the system of writing the number either 3122 or 3 122 is adopted in the University Library in order to avoid any possibility of confusion in case the figure following the decimal were omitted.

It may be of interest to know that it has been found entirely practicable to adapt this classification to a general filing system for information, notes, pamphlets etc. on all branches of the subject of economics. The files are numbered in precisely the same classes as the books; but often there is a large number of files in one subdivision. In any subject in which research is being carried on in the department, or in which the literature and information has become voluminous, as, for example, on Indian

currency and exchange, it has been found convenient to subdivide the library subdivision for that subject by adding numbers to the extent of one or two decimal places. We may therefore have such a number as 3533.21. In addition letters *a, b, c, d, e* are added after the numbers in order to distinguish files according as they relate to original memoranda, to matter in course of preparation for the press, to correspondence, or printed matter, etc.

CLASSIFICATION OF THE ECONOMICS SECTION OF THE ALLAHABAD UNIVERSITY LIBRARY

This will be sufficient introduction to the classification, which now follows.

(Many subdivisions are left blank to be filled later,
and are here omitted.)

- 30 SOCIOLOGY: General Works
- 31 do. Text books
- 32 do. Bibliographies
- 33 do. Dictionaries and Encyclopedias
- 34 do. Essays and Addresses
- 35 do. Periodicals
- 36 do. Year Books
- 37 do. Biographies of Sociologists
- 38 do. Methods of Sociology
- 39 do. History of Sociology
- 40 Social Psychology
- 45 Social Ethics
- 47 Moral ideas, origin of
- 50 Social Evolution
- 52 Civilization, evolution and history of
- 53 Civilization, theories of
- 54 Progress, theories of
- 60 Experimental Sociology
- 65 Special Sociological Studies

70	Heredity
72	Family and the State
73	Sex, Evolution of
74	Sex, Social aspects of
75	Eugenics
78	Anthropology
80	Regional Sociology
85	Ethnology
90	GEOGRAPHY (human and cultural)
91	" British Isles
92	" Europe
93	" Asia
94	" India
95	" North America
96	" South America
97	" Africa
98	" Australia
99	"
100	ECONOMICS
101	"
102	"
103	" Dictionaries and Encyclopedias
104	" Essays and Addresses
105	" Periodicals
110	GENERAL TREATISES—Early English
111	" " Classical English, Adam Smith to Ricardo
112	" " Late Classical (1830-1870)
113	" " Early English and Classical Foreign
114	" Modern English and American General
115	Controversial General Books
116	Psychological School of Economics—Treatises
117	Mathematical economic treatises
118	Modern text-books of economics in English, with Indian or Colonial illustrations.
119	
120	Elementary Text-Books of Economics
121	Scope and Method of Economics
122	Ethical Aspects of Economics

- 123 Economics of Property and Contract Law
- 124 Theoretical Descriptive general books on economics¹ England
- 125 " " " " " America
- 126 " " " " " India
- 127 " " " " " Elsewhere
- 130 Economic Statistical Descriptive Books² : England
- 131 " " " " America
- 132 " " " " India
- 133 " " " " Elsewhere
- 134
- 135 Statistical Collations—general, on many subjects,
 wholly or partly economic
- 136 History of Economic Theories: General
- 137 " " " Ancient
- 138 " " Special (dealing with particular periods
 or countries)
- 139 Biographies of Economists
- 140 PRICES AND MARKETS: General
- 141 Prices, Theory of
- 142 Prices, Statistical works on
- 143 Trade Cycles and Fluctuations
- 144
- 145 International Trade
- 150 Distribution, General Theory of
- 151 Monopolies, Theory of
- 155 Capital and Interest
- 157 Wages, Theory of
- 158 Population, Theory of
- 159
- 160 Land and Rent, Theory of
- 161 State Ownership: Nationalization of Land
- 165 Land Tenure Rent and Revenue (Theoretical).
- 166 Land Laws (Theoretical)
- 170 ECONOMIC HISTORY
- 171 " " England—General
- 172 " " Elementary text books

¹ This class of books is distinguished by the union of a presentation of the theory of economics with the description of the economic character and facts of a particular country.

² This class includes books which describe the general commercial and economic condition of countries with statistics, but with no theoretical discussion of the economic conditions and with no advocacy of any particular policy.

- 173 Towns, Guilds, Boroughs and the Industrial Revolution,
England
- 174 Agricultural and Rural Economic History, England
- 175 Economic History Continental European Countries
- 176 " N. America
- 177 " India
- 178 " Elsewhere
- 179 Ancient Times, Economic History of
- 180 EVOLUTION OF INDUSTRY
- 181 Economic Factors and Policy in History
- 182 Evolution in relation to economic progress
- 185 Communal (or Social) economic theory
- 188 War, economics of
- 190 STATISTICS: GENERAL
- 191 Statistics, Theory and Method
- 192 Mathematical
- 193 Population and Vital Statistics General
- 194 " " " England
- 195 " " " India
- 196 " " " Other Countries
- 197 " " " Special Topics
- 198 Incomes, Statistics of
- 200 SOCIAL ECONOMICS: GENERAL
- 201 " " Theory
- 202 " " Descriptive-General
- 203 " " England
- 204 " " America
- 205 " " India
- 206 " " Elsewhere
- 207 Regional Surveys
- 208 Social Surveys (Cities)
- 209 Social Service General
- 210 PAUPERISM AND DESTITUTION
- 211 Poor Law Reforms
- 212 Betterment and Relief Work
- 213 Women and the Poor Law
- 214 Pauper Labor
- 215 Old Age Pensions
- 216 Alms giving and Charities
- 217 Children and Poor Law Schools
- 218 Famines

- 219 Pauperism in various countries
- 220 UNEMPLOYMENT AND CASUAL LABOR
- 221 Conferences on Unemployment
- 222 Causes and Effects of Unemployment
- 223 Methods for Dealing with Unemployed
- 224 Unemployment Insurance
- 225 Labor Exchanges
- 226 Juvenile Advisory Committees
- 227 Apprenticeship Committees
- 228 Other voluntary agencies
- 229 Immigration and Emigration
- 230 LABOR QUESTIONS IN GENERAL—Conferences and Commissions
- 231 Labor, State in relation to—theoretical
- 232 Labor, History of State policies and legislation
- 233 Labor legislation—general
- 234 Factory System and Legislation
- 235 Occupational Diseases and Sanitation
- 236 Sweating System, Home Industries; Labor of women and children
- 237 Mining and Plantation Labor
- 238 Agricultural Labor
- 239 Labor in various countries
- 240 WAGES AND CONDITIONS OF WORK—General
- 241 Wages, Descriptive and Statistical treatment—England
- 242 " " " —various countries
- 243 Methods of industrial remuneration
- 244 Piece-work Rates
- 245 Wages and cost of living
- 246 Regulation of Wages (Minimum Wage)
- 247 Hours of Work (including eight-hours day movement)
- 248 Shop Assistants and Clerks
- 249 History of Wages
- 250 TRADE UNIONISM AND GUILDS
- 251 Trade Unionism, treatises, etc., on
- 252 Trade Union Councils, Congresses and Federations
- 253 Trade Unions and the Law
- 254 Trade Unions—England
- 255 Trade Unions, History of
- 256 Trade Unionism in various countries
- 257 Strikes
- 258 Conciliation and Arbitration

- 259 Guilds (Modern, producing and labor)
- 260 ASSURANCE—General
- 261 Workmen's Insurance
- 262 Sickness Insurance
- 264 Old Age Assurance
- 265 Life Assurance
- 266 Fire Insurance
- 267 Employer's Liability
- 268 Benefit Societies
- 269 Insurance in various countries
- 270 HOUSING PROBLEM
- 271 Urban Housing (including industrial towns)
- 272 Housing in various countries
- 273 Rural Housing and "Back to the Land"
- 274 Housing, and Town Planning—various countries
- 275 Town planning
- 276 Garden Cities
- 277 Housing and Town Planning—India
- 278 Town Planning—India
- 279 City Surveys—general, and for town-planning
- 280 CO-OPERATION—General
- 281 Co-operation, Distributive
- 282 Co-operation, theory of
- 283 Co-operation—India
- 284 Co-operative Farming
- 285 Co-operative Production
- 286 Co-operative Credit Societies
- 287 Employer's Co-operation
- 288 Consumers' Leagues
- 289 Other Co-operative and friendly Societies
- 290 CO-PARTNERSHIP—Industrial (including Profit-sharing)
- 291 Profit-sharing
- 293 Temperance Movement—England
- 294 " " —Europe
- 295 " " —America
- 296 " " —India
- 297 Betting and Gambling
- 300 DESCRIPTIVE ECONOMICS
- 301 Descriptive of Commerce and Industries—general
- 302 Dictionaries of Commercial Products and Industrial Arts

- 303 Industrial Conferences and Commissions, Exhibitions, etc.
- 304 Chambers of Commerce Reports, Rules and Regulations
- 305 Technical and Commercial Societies, proceedings and reports
- 306 Trade and Commercial Year Books and catalogues
- 307 Directories and Commercial Guide Books
- 309 Professions, Journalism, Art, etc.
- 310 TRUSTS AND INDUSTRIAL COMBINATIONS
- 311 " " " America
- 312 " " " Europe
- 313 Industrial Organization
- 314 Joint Stock Companies, economic studies of, as form of
 Industrial Organization
- 315 Unfair Competition and illicit practices
- 316 Adulteration, descriptive
- 318 Workshop and Home industries—England
- 319 " " " India
- 320 RURAL ECONOMICS
- 321 " " India
- 322 " " England
- 323 " " America
- 324 " " Elsewhere
- 325 Rural Economic Development—(including colonization
 schemes)
- 326 Agricultural Credit and Indebtedness (See also Co-operative
 Societies)
- 327 Agricultural Land Tenure (Descriptive)—English Speaking
 Countries
- 328 Land tenure, rent and revenue, and assessment, India
- 329 " " " Non-English-speaking countries
- 330 AGRICULTURE AND FORESTRY, Economics of
- 331 Agriculture, Technical, Science of—general
- 332 Agriculture, general, India
- 333 Agriculture, England
- 334 " Western Europe
- 335 " America, North and South
- 336 Agriculture, general, Russia, China, Japan, etc.
- 337 Irrigation
- 338 Plantation Industries,—Rubber, Tea, Coffee, etc.
- 339 Forestry and Economic Botany
- 340 MINING AND FISHERIES
- 341 Coal Trade and Mining, India

- 342 Coal Trade, elsewhere
- 343 Precious Metals
- 344 Other Metalliferous Mining
- 345 Quarries
- 346 Mineral Oil Industries
- 347 Superficial deposits—Nitrates, Salt, Asphalt
- 348 Sea Fisheries
- 349 River Fisheries
- 350 ENGINEERING WORKS
- 351 Public Works—India—general
- 352 Bridges
- 356 Irrigation Canals and Dams, (Technical)
- 357 Electrical Generating Stations
- 358 Hydro-electric power schemes
- 359 Power, sources of, and prime movers
- 360 TEXTILE INDUSTRIES—General
- 361 History of Cotton Manufacture and Trade
- 362 Cotton, raw, growth of, and trade in
- 663 Cotton Spinning and Weaving, India
- 364 " " " United Kingdom
- 365 " " " Continent of Europe
- 366 Cotton Industry, America and elsewhere
- 367 Other vegetable fibre textile Industries
- 368 Woollen and worsted and silk Industries—All countries
- 369 Textile Operation and Machinery—general
- 370 OTHER MANUFACTURING INDUSTRIES
- 371 Iron and Steel Industry—Europe
- 372 " " " —America, India, etc.
- 373 Tin plate industry
- 374 Hides, Leather and Tanning
- 377 Oil industry
- 378 Paper-making and wood pulp industries
- 379 Flour milling, etc.
- 380 REGIONAL—INDIA
- 381 Bengal
- 382 Bombay
- 383 Madras
- 384 United Provinces
- 385 Punjab
- 386 Central Provinces and Berar
- 387 Burma

- 388 Native States
- 389 Elsewhere
- 990 REGIONAL—ELSEWHERE
- 391 Europe—General
- 392 England
- 393 Western Continent of Europe
- 394 Eastern Continent of Europe—Russia
- 395 Asia
- 396 Africa
- 397 North America
- 398 South America
- 399 Australia
- 400 TRANSPORTATION—General
- 401 Transportation—Europe
- 402 Transportation—England
- 409 Transportation—General—History of
- 410 RAILWAYS—General, Economics of
- 411 Railway rates, technical works on
- 412 Railways English
- 413, „ European
- 414 „ Indian
- 415 „ Location of
- 416 „ Projection, construction, estimates, reports
- 417 „ North American
- 418 „ Electric
- 419 „ History of
- 420 ROADS
- 421 „ History
- 422 „ Construction of Technical
- 423 „ India
- 430 CANALS AND WATERWAYS, INLAND
- 431 „ History of
- 432 „ English
- 433 „ for ocean going vessels
- 434 „ India
- 440 OCEAN NAVIGATION—Steamship, Freights, etc.
- 441 Ocean Freights, Rebates, etc., Subsidies
- 442 Conferences
- 445 Posts and Telegraphs
- 446 Telephones

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|-----|---|
| 447 | Telegraphs |
| 450 | COMMERCE—DESCRIPTIVE |
| 451 | Commerce—British |
| 452 | Commerce—India |
| 453 | Commerce—various countries |
| 455 | Commercial Geography—General |
| 456 | " " —Europe |
| 457 | " " —Asia, Africa and Australia |
| 458 | " " —India |
| 459 | " " —America |
| 460 | WAR, EFFECTS ON TRADE—General |
| 461 | " " England |
| 462 | " " America |
| 463 | " " India |
| 470 | APPLIED ECONOMICS—General |
| 471 | Economic Development—Art of |
| 500 | FINANCE, CURRENCY, AND BANKING—General, and various countries |
| 501 | Theory of Finance |
| 502 | Outline |
| 503 | Dictionaries |
| 504 | Essays and Lectures |
| 505 | Periodicals and Magazines |
| 506 | Societies, Transactions, Reports, etc. |
| 507 | Education in, teaching and study of finance, etc. |
| 508 | Polygraphy, collected works, extracts, etc. |
| 509 | History of Finance |
| 510 | PUBLIC FINANCE |
| 511 | Financial systems of various countries |
| 512 | Budgets |
| 513 | Public Income |
| 514 | Public Expenditure |
| 515 | Public Debt |
| 516 | State ownership and undertakings |
| 517 | War Finance |
| 518 | Indian Finance and its history |
| 519 | Financial history of various countries |
| 520 | TAXATION |
| 521 | Taxation Reform |
| 522 | Local Taxation |
| 523 | Single Tax |

- 524 Income Tax
- 525 Betterment Tax
- 526 Customs Duties and Tariffs
- 527 Excise and Taxes on Consumption
- 628 Other Taxes
- 529 Taxation in various countries
- 530 BANKING AND FINANCE
- 531 Banking in India
- 532 Loans and Credit Systems
- 533 Government and Central Banks
- 534 Joint Stock and Commercial Banks
- 535 Land Banks
- 536 Co-operative and Savings Banks
- 537 Stock Exchanges, Bonds and Investments, etc.
- 538 Bank organization and business described
- 539 History and description of Banks—various countries
- 540 COINAGE AND CURRENCY
- 541 Metal Standards
- 542 Money and Metallic Coinage
- 543 Paper money
- 544 Prices and Values
- 546 Foreign Exchange
- 547 Mints
- 548 History of Currency
- 550 BANKS AND CREDIT—History and Evolution
- 552 Commercial Crises and Panics, descriptive
- 560 FREE TRADE AND PROTECTION—General
- 561 Treaties
- 562 Tariffs
- 563 Sugar Bounties
- 564 Tolls and Markets
- 565 Navigation Laws
- 566 Fiscal Policy in America
- 567 " " " England
- 568 " " " India
- 569 " " " Elsewhere
- 570 COMMERCIAL POLICY—General
- 571 Commercial Policy (trade policy)—British Empire
- 572 Commercial and Industrial Policy—India

- 600 PRIVATE BUSINESS AND ADMINISTRATION—General Works
- 601 Management of Private Affairs
- 602 Domestic Economy
- 603 Dictionaries, Cyclopedias
- 604
- 605 Periodicals
- 606 Reports, Societies' transactions, etc.
- 607 Education for business career
- 608 Popular books on business character and personal efficiency
- 610 ACCOUNTANCY AND BOOK-KEEPING—general works
- 611 " " —theory of
- 612 " " —elementary
- 613 Dictionaries, Cyclopedias
- 614 Special—not elsewhere included
- 615 Secretarial work
- 616 Text books for Clerks
- 617 Office routine
- 618 Filing
- 619 Graphic methods in business
- 620 FINANCE, PRIVATE—General
- 621 Joint Stock Companies, practical working of (Manuals
for Secretaries, Accountants, etc.)
- 622 Joint Stock Companies, accounts, books or, and forms for
- 623 Flotation of companies and financing industrial enterprises
- 624 Re-organizations and amalgamations—Companies and firms
- 625 Periodicals
- 626 Depreciation and Sinking Funds
- 627 Valuation
- 628 Investment—General Works—Investment Year Books and
Manuals
- 630 COMMERCIAL PRACTICE AND LAW—General
- 631 Books for heads of firms
- 632 Elementary text-books
- 633 Shipping practice
- 635 Commercial Law
- 636 Business Customs—English
- 637 Business Customs—Foreign
- 640 SELLING AND ADVERTISING—General
- 641 Principles of Selling
- 642 Selling Departments—wholesale—travellers, etc.
- 643 Retail selling—mail order business

- 644 Retail Selling—Shops
- 645 Advertising—general
- 646 Advertising, principles of
- 647 Advertising Schemes, practical manuals
- 650 MANAGEMENT—General
- 651 Works and Factory Organization and Management
- 652 Executive control
- 653 Factory Planning and Organization
- 654 Cost Accounting
- 655 'Practical' Management
- 656 Scientific Management
- 660 MANAGEMENT OF LABOR
- 661 Selection and control of workmen
- 662 Fatigue and overstrain (including working hours)
- 663 Methods of remuneration (practical details of wages systems)¹
- 664 Workers' welfare
- 670 EFFICIENCY—General works on, in all occupations
- 671 ,, Special works on in, various occupations
- 672 ,, of Manual labor
- 673 Psychology of mental operations of business
- 674 Psychology of manual operations
- 675 Environment and efficiency
- 680 SPECIAL BUSINESSES AND TRADES
- 681 Engineering Workshops
- 682 Textile Mills
- 683 Printing Trade
- 684 Contracting and Constructional Works
- 690 BUSINESS CALCULATORS AND TABLES
- 691 Multiplication, Logarithm, and Mathematical Tables
- 692 Commercial Ready Reckoners, and Mensuration for Commercial purposes
- 693 Interest, Compound Interest, bond and sinking fund tables
- 694 Share Tables
- 695 Income and Wages Tables
- 696 Income tax and percentage profit and estate duty tables
- 697 Foreign exchange tables
- 700 EDUCATION—General

¹ Cf. 243 which includes general descriptive books only, such as Schloss's *Methods of Industrial Remuneration*. This subdivision, 663, contains books on special wages systems with full explanations of details for working them.

- 800 POLITICAL SCIENCE
- 801 Political Science—Theory, etc.
- 802 Compends, Outlines
- 803 Dictionaries
- 804 Essays, Lectures, Speeches
- 805 Periodicals, Encyclopedias
- 806 Societies
- 807 Education
- 808 Collected works, etc.
- 809 History of Political Science
- 810 STATE AND FORM OF GOVERNMENT—Various Countries
- 811 Family, Patriarchal Science—Social and Political
- 812 Tribes, Clans, Village Communities—social and political
- 813 Feudalism—social and political treatment
- 814 Monarchy—Aristocracy and Bureaucracy, Imperialism
- 815 Democracy and Republicanism
- 816 SOCIALISM—General
- 817 Socialism—History and Biography
- 818 Socialism—Continental Schools
- 819 Syndicalism
- 820 COLLECTIVISM AND COMMUNISM
- 821 Anarchism
- 822 Political Parties and Party Conventions, etc.
- 823 International Policies and Statesmanship
- 824 Political Struggles, unrest and revolutions
- 825 Internal Relations with groups and Individuals
- 826 Movements and questions of Nationalities, Races and Languages
- 827 The State and Social Groups (Churches, and Associations)
- 828 The State and the Individual
- 829 Citizenship
- 830 Immigration
- 831 Suffrage
- 832 Women's Suffrage
- 833 Slavery
- 834 Colonies and Colonial Expansion
- 835 International Relations and Policy
- 836 International Arbitration (Hague Conferences)
- 837 International Law
- 838 World States, International government (Commonwealth of Nations), Peace Leagues, etc.
- 839 International Treaties

- 840 LEGISLATION AND LEGISLATURES, CONSTITUTIONS
- 841 Legislation
- 842 Parliaments, Elective Assemblies
- 843 " " England
- 844 " " British Empire
- 845 " " India
- 846 " " Germany
- 847 " " United States
- 850 ADMINISTRATION—GENERAL
- 851 Administration—Theory, etc.
- 852 Administration of Central Government
- 853 Departments of State
- 854 Administration—History of
- 855 " —United Kingdom and British Empire
- 856 " —United States
- 857 " —India
- 858 Colonial Administration
- 859 Administration in various countries
- 860 LOCAL GOVERNMENT—General
- 861 General Questions of Municipal Administration
- 862 Municipal Finance and Taxation
- 863 Local Government—India
- 864 Sanitation and Public Health
- 865 Public Buildings and Works
- 866 Social Welfare Work
- 867 Land Policies
- 868 Trading Enterprises
- 869 Local Government, history and description, various countries
- 870 MILITARY SCIENCE
- 880 LAW, General—Reports, Statutes, Digests, etc.
- 890 LAW, Public
- 891 International Law
- 892 Constitutional Law
- 893 Criminal Law
- 894 Crime and Penology
- 895 Martial Law
- 896 General Treatises on Law
- 897 Law of Real Estate, Land title, transfer, etc. and tenures
- 898 Hindu and Mohamman Law
- 899 Law in other countries
- 900 SOCIAL CUSTOMS—General

CURRENT NOTES

The feature of the economic situation in India since our last issue (July) has been the adverse balance of trade and the consequent weakness of exchange. The sales of reverse Councils were continued throughout the summer at the rate of £1,000,000 weekly, but were discontinued at the end of September. Exchange fell immediately, and has remained weak ever since, with a tendency to weaken further. There appear to be three principal factors combining to produce this result: (1) the very heavy orders for goods of all kinds given by importers during the first half of the present year, bills for which are still coming to hand for payment; (2) the general fall of world prices which became pronounced in the later part of the summer and operated to curtail exports; (3) the weak monsoon, which has necessitated close control of the export of food grains—our only important commodity of export for which there seems to be an insatiable world-wide demand. The instability of exchange is, however, itself a factor in the continuance of the adverse trade position, because exporters are so uncertain as to what the rate of exchange might rise to by the time their goods are shipped that they scarcely dare to quote prices in foreign currencies.

The general fall of world prices is becoming, however, more and more the dominating feature in the

economic situation in India. The fall of prices began in America during last summer and about the same time in England. The following monthly index numbers of prices in Great Britain¹ illustrates this:—

January	245
February	260
March	262
April	266
May	260
June	256
July	255
August	254
September	249
October	240

In all directions there are reports of stagnation in trade, the growth of unemployment, and all the other phenomena usually associated with the commencement of the collapse of prices after a period of boom.

It is perhaps worth noting that the exact year of the turn of the commercial tide would seem once again to have been determined by cosmic influences expressing themselves through the harvests. If the reader will turn to Vol. II, Part 1 of this Journal, page 43, he will see given a list of the years of maximum prices and of the intervals between them. If we may now add 1920 as the next maximum after 1907, as appears probable, we shall find that this fits in fairly satisfactorily with the data as to the frequency of periods of different lengths. On page 45 were given the intervals of the trade cycles from the year 1670 to 1907; and we may now add another period of 13 years. The maxima of the frequency curve for the length of the trade cycle now stand out clearly at 7, 10 and 13 years. If the War had not

¹ From *The Statist*, Nov. 13th, 1920, p. 773.

occurred, we should almost certainly have had a maximum in 1914, and possibly the next maximum would have occurred in 1921, giving two seven-year periods.

The announcement of the death of Mr. Percy Anstey, which took place on November 23rd, came as a painful shock to his many friends in India, amongst whom are a large number of economists. Mr. Anstey came to India from the London School of Economics where he had studied after abandoning his former profession as an actor. In that he had been successful; but he felt drawn to serious studies and wished to devote himself to teaching. He came to India as the 'first Principal of the Sydenham College of Commerce; and he has not only held this post for six years with distinction, but gained the respect and affection of a large circle of students and friends. It is due mainly to his efforts that the Sydenham College of Commerce has already gained great reputation in spite of the very severe difficulties which handicapped its development during the War period. It was housed in a top-flat of a commercial building in Hornby Road, because money for the projected buildings could not be found during the War; but still more serious was the difficulty that the trained and experienced teachers which it had been intended to bring from England were for the same reason unobtainable. Mr. Anstey collected the best men he could find in this country and created a thoroughly efficient staff. Economists will remember Mr. Anstey as the genial and hospitable Honorary Local Secretary of the Indian Economic Association during its Second Conference, which was held in Bombay two years ago. Besides his official duties, Mr. Anstey had many public activi-

ties, amongst which not the least onerous was his membership of the Bombay Corporation.

It seems desirable to call the attention of economists in India who are fellows of the Royal Economic Society of London to the fact that they are not entitled to use the letters F. R. E. S. after their names. We learn from the Secretary of the Society that the charter of the Society which granted it permission to style itself "Royal" did not grant the fellows the right to use the letters F. R. E. S., on the ground that this might create confusion in the minds of the public with fellows of the Royal Society and of a few other old societies which have had this privilege for many years. The fellows of the Royal Economic Society are entitled, however, to place the letters F. E. S. after their names.

We have received a recent Report of the Librarian of Congress (U. S. A.), and we notice in it a section dealing with the Legislative Reference Service. This was established about seven years ago for the purpose of furnishing to members of the Senate and of the House of Representatives reliable and up-to-date information on any subject connected with legislative bills in course of passage through either house. Private members may also avail themselves of the service in connection with any legislative measures they have under consideration, and in which they require information, suggestions, and assistance in drafting. Thus the range of subjects on which inquiries were addressed to the Service is extremely wide, as shown by the extensive list given in the Report. The total of 1,280 inquiries in one year is scattered over all kinds of legal,

historical, social, economic and statistical subjects; and it requires the resources of a great Library to supply all this information. There can be no two opinions, however, as to the utility of the service in (1) reducing the number of questions in the House of Representatives which are merely requests for information, (2) reducing the labor of the staff of the secretariat offices in finding information for Ministers both for legislation and for replying to questions, (3) enabling bills to be drafted with all apposite information to hand, thus saving the time of the House, (4) in reducing controversy to questions of principle and policy by eliminating doubt as to facts, (5) promoting legislative progress by marshalling for inspection and comparison the acts and bills of every legislature of the world on any desired subject. May it not be worth considering whether a Legislative Reference Bureau should not be attached to each Legislature under the new Reforms Scheme? It would give point to the debates and greater efficiency in the laws if information difficult of access were thus to be made available to the non-official as well as to the official members.

REVIEWS OF BOOKS

RELATING TO INDIA

The Trade Relations between England and India (1600-1896)

BY C. J. HAMILTON, M.A., Minto Professor of Economics,
Calcutta, Thacker, Spink & Co. 1919. pp.vii, 263. Price
Rs. 5.

Mr. Hamilton's volume is a valuable contribution to the economic history of Modern India. In no field of study is dispassionate enquiry more desirable, partly because previous works dealing with economic India in the 18th and early 19th centuries have been based rather on ingenious conjecture than on critical research; partly because the subject-matter of economics touches every man in the most intimate fashion, and so lends itself to political uses. The trade relations between India and England for example have offered scope for two most divergent views. The average Indian undoubtedly believed that the Indian cotton industry was killed of set purpose by English commercial policy; the average European believed that it was killed by the development of new methods of production; but neither was able to give much reason for the faith that was in him. Mr. Hamilton's book is well calculated to raise the discussion to a higher plane than that of prejudice.

The subject is large, and the material voluminous. It cannot therefore be disposed of in a single slender volume. Before any definitive judgment can be formed, a score of monographs must be composed and digested. The history of the company's trade with each of its presidencies, for example, still lies buried in hundreds of manuscript volumes; so that there are years of work for many workers before the concrete facts, which must form the basis of such a work, can be

objectively established. The value of Mr. Hamilton's labors resides in his having made that task easier of accomplishment, by a dear and cogent analysis of the existing information.

The trade relationship between Great Britain and India may be considered under three principal aspects—the effects of English restrictions of imports into England; the effects of unrestricted English exports to India; and the effects of the resultant balance of indebtedness on India.

Restriction of imports of certain classes was a regular and normal feature of English commercial policy; but Mr. Hamilton has no difficulty in showing, by a very careful analysis of the English import laws, that it was very seldom directly aimed at India. The chief instance was the act prohibiting the wear of Eastern wrought silks and painted calicoes. This has been occasion of more than one misstatement. The *Imperial Gazetteer* (which should have known better) transforms the act into a prohibition of import, which it was not. Wrought silks and painted calicoes were regularly bought and shipped home on the company's account all through the 18th century, for re-export to Northern and Central Europe. List extends the act into an absolute prohibition of all silk and cotton fabrics—"Not so much as a thread of them," says he, "would England permit to be used." This of course is ludicrous. Calicoes—long cloths and salampores, for instance—were largely imported and worn in England, until the English cotton-industry sprang up at the end of the century. It is true that duties were imposed; and under the pressure of war, the duties were sometimes very high: Thus the duties on plain white calicoes, which in 1800, were 20 per cent, in 1805 rose to 66, in 1812 to 71, and in 1813 to 88 per cent. These are the duties which are supposed to have killed the Indian weaving industry. Chronology however does not support this view. By 1789 a hundred and forty-three cotton-mills were already at work in England. Before 1790 the export of English cotton goods exceeded a million sterling; it doubled by 1795, and doubled again by 1800. Furthermore, at this time the English cotton industry was subject to considerable excise duties, which must have acted as a set-off against the import duties payable by Indian piece-goods, but which latter were refunded on that part which was re-exported abroad. English cottons paid excise no matter whether they were consumed in or out of the country; Indian cottons consumed abroad paid no English

duty; English exported cottons and Indian cottons re-exported from England would pay the same rate of duty at the country of import. The rapid growth of English exports shows therefore that, before the imposition of heavy war-duties, the English manufacture, with its machinery and large-scale production was already beating the Indian cloth on neutral ground. We conclude (with Mr. Hamilton) that Indian calicoes were not driven out of the European markets by high duties imposed by English policy.

The case of the tariff system established in India by the Company, which permitted the import of British cottons on terms which enabled the latter largely to oust Indian goods, stands on a somewhat different footing. It is certain that no such duty was imposed as would have permitted the old-fashioned Indian industry to compete with the imported goods. But it is equally certain that this was no Machiavellian policy designed against Indian interests. The Company's despatch of 1823, which Mr. Hamilton quotes, is very instructive in this connection. The company was much concerned to observe that not only had the exports of India piece-goods fallen away, but also the imports of British piece-goods were increasing; it was not willing to maintain a branch of industry, which had ceased to be profitable, by arbitrary encouragements; but it was anxious that fiscal regulations should not rob any industry of the prosperity which it would otherwise enjoy, and accordingly directed the removal of the inland transit dues, which constituted an appreciable burden, inherited from long-past rulers of India, upon the indigenous production. It is true that this reform was not immediately carried out; but no dispassionate reader of the despatches can doubt that the directors were anxious for the prosperity of India as a whole, even to the point of sacrificing revenue (in spite of Mr. Dutt's assertion) for that object. It may also be noted, as Mr. Hamilton observes, that the decline of Indian piece-goods production was slower than is usually supposed. For many years after the piece-goods of Bengal and Madras had ceased to be exported to Europe, the heavy rate of freight enabled them to be exported in large quantities to various Eastern markets; and, as we know, the hand-loom industry is still far from extinct. Whether active fiscal intervention in its favour would have benefited India on the whole and in the long run is to the present writer an extremely uncertain matter.

The third large aspect of Mr. Hamilton's subject is the balance of trade and the alleged drain of specie resulting from it. The precise extent to which specie was actually remitted to Europe is unknown; that it has been greatly exaggerated by writers such as Mr. Digby and Mr. Dutt is undoubted. It was probably a spasmodic process, to which recourse was had in exceptional years, when neither the English, nor the foreign companies, would grant an adequate volume of bills on Europe. This matter is one that can be finally settled only by the patient examination of a large number of documents. Mr. Hamilton is certainly right in his contention that the existing evidence does not warrant any belief that the metallic drain was large or regular, and that a number of circumstances concur to suggest that the remittances thus made on private account were on the whole inconsiderable. But we doubt whether he allows quite enough weight to the popular belief as displayed by Shore and Grant, that such remittances were sometimes made on a considerable scale. The subject is one of interest, which we should like to see discussed in the light of more complete evidence than we have at present. Paul Benfield, it may be remembered, risked (and lost) his fortune in an attempt to establish a regular house of remittance between England and India—a predecessor of our modern exchange-banks. His failure, we believe, was due rather to the accidents of war than to any error essential to his scheme. If that is so, it seems to postulate much more than one single stream of remittances in one direction only.

In conclusion we may congratulate Mr. Hamilton on having so ably dealt with and analysed the existing information on a subject of such large interest; and we hope his work may lead to wider and deeper investigations, until we know what solid facts—as apart from inference and hypothesis—we really have to go upon. Meanwhile, when Mr. Hamilton's book goes to a second edition, as it well deserves to do, we may suggest that a revision of the more strictly historical portion would be an improvement. For instance modern research has abolished the fortune which Dupleix (in an endeavor to explain the origin of his own) said had been left him by his father; the Nawab of Arcot was not in the least pacified by Dupleix's offer to hand Madras over to him; nor did Clive ever depose Mir Jafar—that was left for lesser and meaner hands. These, of course, have no bearing on the general scope and purpose

TO INDIA RELATING

Chief Mr. Thompson's evidence that the
 lack of telegraph engagement stimulated
 the volume.

[illegible]

—*India Economic Study*. of Balkan
E.E., LAW. H. MORRISON, Gish., C.
& Co. 1920. London; 328mills

Price in England 12s. *net.*

work With the publication of this
a new history of Latin America on
on the region's political generalization
attends to the critical study of the
of the 19th century materials,
'dry' and 'dry' analysis on the
situation of the people of the people
the state, the weights, measures,
transport, agriculture, trade, etc.,
concludes by the following: the
the state and the people.

of writers living in an age when these qualities were unknown and in a country with wide variations of weights, measures and currency from province, to province and sometimes even from reign to reign in the same province. The enormous amount of labor involved in this spade work can be appreciated only by those who have tried to make a statistical survey of the Mughal empire, and I am sure future workers in the same field will be thankful to Mr. Moreland for having cleared their path and made their task easier in several respects. He has removed many ambiguities and corrected many popular errors as to the significance of old terms and the true state of India in 1605, where we are apt to apply the ideas of 20th century Europe without any suspicion of our being in the wrong.

The author's study is the more useful because his method is comparative. He is constantly harking back from his carefully sifted data of 1605 to the known facts of the same part of the world in our own days and thereby bringing the meaning of his researches home to the modern reader. Mr. Moreland's general conclusions are:—

- “(i) The upper classes were able to live much more luxuriously in the time of Akbar than now.
- (ii) The middle classes appear to have occupied more or less the same economic position as at present, but their members were proportionately much smaller.
- (iii) The lower classes lived even more hardly than they live now. We cannot be sure whether they had a little more or a little less to eat, but they probably had fewer clothes, and they were certainly worse off in regard to household utensils and to some of the minor conveniences and gratifications of life.” (pp. 294 and 279.)

Now, from the nature of the existing evidence it is impossible to quote chapter and verse in support of these opinions, and indeed any general opinions on Mughal India. They are necessarily based on the impressions left on the mind by a large number of detached facts, and are the result of piecing together small bits of information and inference derived from a variety of Persian official histories, European travellers' books, factory records, contemporary vernacular poems and tales, etc., From my own extensive reading in this class of sources, I agree in the main with Mr. Moreland's conclusions, though with certain modifications.

The lower classes had indeed fewer clothes than now. Though handloom weaving was almost universally practised throughout the country, its output was necessarily small, and a moderate sized cotton-mill of today produces more *dhotis* than a hundred thousand hand-looms. Moreover, cotton, and therefore yarn, were comparatively dearer in most parts of India in those days of no transport facilities. We have evidence that machine-made cloth is enabling our agricultural classes to clothe themselves more fully and easily in these days of higher grain prices than three centuries ago. But I am persuaded that the village population and town laborers alike in the Gangetic valley (as well as those of the Krishna and Godavari) at least were better fed in Akbar's time than now. No doubt, they lacked the resources which modern civilisation has given their descendants for combating a local famine with the surplus produce of distant places, and had not the same amount of garnered wealth for resisting famine as they now have in certain provinces. But in normal years they enjoyed the full advantages of Nature's lavish bounty in absence of export, the existence of many free pastures and water-courses from which they could add to their income (as the English village laborer used to do before the enclosures of the middle 18th century). Dairy products were cheaper purer, and distributed more widely and to a lower stratum of society even 50 years ago than now. Fish (which in Bengal is the most important item of food for all after rice and *before dal* or vegetables, and in other provinces is eaten by the numerous lower castes), was more plentiful and in many places could be had for nothing from the many neglected streams and tanks, like "the things of Nature." It has now become a luxury even for the middle class in our towns.

In fact, the population was sparse, and the lower classes benefited by reason of it. Life was also simpler for all; hence the vanquished in the struggle for existence,—the weak, the infirm, the unsuccessful in business,—did not find it so hard a world to live in as now. There were certainly greater colour and gaiety in life then, and that implied rude plenty in normal years. When *akal* (famine) or the great Mother (pestilence) desolated the land, there was no help for it; man bowed his head to divinity, but raised it after the storm had blown over. [Here I must warn the student

against accepting the picture of misery given in Mukunda Ram's poem *Chandi* as typical of 16th century Bengal, any more than the *Vision of William concerning Piers the Plowman* is universally true of 14th century England.]

The chief gain of the lower classes—and indeed of all classes,—in British India has been security of property and freedom of production and service. The wealth of the upper grades of our town laborers is now certainly greater and their standard of living higher than in 1605. But the lower grades of town laborers and peasants, even when richer in money, are no better off than in 1605, probably worse, as they have new wants to supply and live in an overcrowded bustling world that has no pity for the fallen of the industrial army.

There *was* a middle class in Akbar's India, though not so large or influential as now. It was composed partly of the hereditary (lower) *civil* service of the State,—the *amlas* of the revenue and accounts departments, without whom the Government could not go on, (as Aurangzib found to his cost, when he rashly ordered the removal of all Hindus from these posts), and partly of the small *zamindars* and village headmen, both in Northern and Southern India. The town traders and bankers, as well as the *military* officers of the Crown were subject to more violent fluctuations of fortune and could not constitute any permanent class in society. This is evident from the utter decline and final obscurity of the grandsons of even the highest nobles, so often illustrated in the *Biographical Dictionary of the Mughal Peerage* (*Masir-ul-umara*.)

When Mr. Moreland speaks of Akbar's higher officers as "consisting largely of foreigners" (pp. 69 and 279), the student has to bear a correction in his mind. These men were foreigners *by birth* no doubt, but they made India their home, and most of them broke the bridge for a return to their ancestral Iran or Turan. In Akbar's reign, (and the remark is even more true of the 17th century), whenever a Central Asian, Persian or Turkish soldier or minister came to India in search of fortune, he thereby banished himself for ever from his home land. There was the greatest rivalry between the Great Mughal and the rulers of Turan and Iran for several generations. Every adventurer coming from these countries to India was a deserter in the eyes of his native

king. Such men had usually given offence to their kings before leaving home (*vilayet*), and subsequently found the greatest difficulty in bringing to India their wives, sons and sons-in-law if left behind at home. Witness the cases of Ali Mardan Khan the Persian, and Husain Pasha (created Islam Khan by Aurangzib) the Turk. These refugees could not leave India; they bred and multiplied here, and therefore after one generation they ceased to be foreigners. Even the Mughal imperial family forgot its Central Asian origin. We have a significant anecdote in which a son of Aurangzib complains against an officer saying, "He is a rascal,—a Turk," and the Emperor replies with a smile "We too are Turks" (*Mā ham Atrak-em!*)

Mr. Moreland is right in combating the sweeping definition of *zamindars* as only farmers of the revenue. The term included a variety of classes. In the Persian histories it habitually designates ruling chiefs not high enough to be called Rajahs. Such men exercised full legal jurisdiction over their tenants, or more correctly, their subjects. Even when they lost this feudal power under a new dynasty or were absorbed in the expanding and levelling Mughal empire, they retained their property in the land. The *zamindar*, even in his capacity of a middleman collecting Government dues from the actual cultivators is not a product of the decadence of the Mughal empire nor a wilful violation of Akbar's system of direct revenue collection by paid servants of the crown. He is as old as the code of Manu, and even older. In fact, ancient states had not enough of trusty servants to collect the revenue directly from all parts of their territory; they had to come to terms with men of local influence—often the barons and even distant scions of the defeated dynasty,—to farm the revenue to them, and be satisfied with a lump sum from the contractor whose position naturally became hereditary. Todar Mal's system of survey and assessment of each field was an innovation, an exception to this time-honored system of revenue farming; and it prevailed only in the central and longest-settled provinces of the Mughal empire, while in the newly or ill-subdued provinces on the frontier—like Bengal, where the annual alluvium and diluvium made the record of rights and survey impossible,—the State had to collect through the *zamindar* if it was to get anything out of the land. The peasant in these

frontier parts, however, had in those days the same high value in his *zamindar's* eyes as (barring community of blood) the highland clansmen had in their chieftain's estimation. There have been cases of *zamindar's* defending themselves with the help of their tenantry,—both free and villein (*ghulam*), in East Bengal down to the last generation. Tenants in such a society could not have been treated like the Irish cottiers.

Akbar's system of "survey and settlement" went on extending throughout the 17th century, as will be clear from the areas of "surveyed land" (*zamin-i-paimuda*) for the different *subahs* given in my *India of Aurangzib: Statistics, Topography and Roads*, (published in 1901)

Mr. Moreland's contrast between then and now will tempt his readers to pass sentence on the old Government. But it would be unfair to judge of the 16th century by the standard of the 20th, and to expect in the India of Akbar the economic and political principles which were accepted in Europe only late in the 19th century. The greatest gifts of the British to India have been *political* directly and economic only in a secondary way. They are, security of property and personal freedom for the individual. These, even more than pure and convenient courts of justice, an efficient police, mechanical transport and uniform currency, have improved the economic condition of modern India. On the other hand, Mughal India was under an essentially military type of administration, and that too conducted by a nomad people. This political factor entirely dominated our economic situation in that age. The unspeakable degradation of the intellect and character of the subject people under nomadic rulers alone offers an adequate explanation of the real economic misery of this fabled land of gold in the age of Akbar. India even in the economic sphere has profited most from the political or non-economic effects of British rule—*viz.*, personal freedom, security of possessions and, above all, the spirit of progress which we owe to Western statesmen and educationists. These, and not a "return to the learning of Confucious," will enable India to compete with Europe in the production and enjoyment of wealth.

JUDANATH SARKAR

REVIEWS OF BOOKS

ENGLISH

Economics for To-day. By ALFRED MILNES. London and Toronto: J. M. Dent & Sons, Ltd. 1920. pp. 256. Price in England 3s. 6d.

There is a host of text-books of economics; but in all of them their defects are more prominent than their merits. This being our opinion, it will be understood that it would require a book of exceptional originality to arouse our enthusiasm. *Economics for To-day* is intended to give an elementary view of the economic life of the people—primarily the English people; and this it does in a systematic manner. The introductory analysis in the first chapter gives us a graphic picture of the origin of the finished commodities with which the shops provide us, and of the evolution of economic life during the past one thousand years. The fundamental ideas and definitions in economics are introduced in the next two chapters; and then there is a description of the mechanism of exchange, followed by a very useful treatment of the law of demand price. The "demand price curves," as the author correctly calls them instead of "demand curves," are well drawn; but the supply price curve exhibiting the tendency to increasing return is crude, for it falls much too fast for a normal case and very nearly reaches the zero line. The treatment of distribution is disappointing, for the importance of marginal productivity in establishing the demand for each factor of production is not made clear. It is doubtful whether the author fully understands his Marshall, and whether he has read the works of Wicksteed and T. N. Carver. The book deals with modern problems of labor, and the figures used by way of illustration are well chosen.

How it all Fits Together—A Novice's Introduction to the Game of Life. BY LEONARD ALSTON, Litt. D. London and Toronto: J. M. Dent and Sons. 1920. pp. 158. Price in England 4s. 6d. net.

This is a spirited attempt to portray the fundamental truths of economics for English readers in a picturesque and

attractive style. The book is not merely written in popular language: it is breezy and entertaining. The ideas are very clearly expressed; and, considering the wide field covered the amount of error conveyed owing the impossibility of stating the whole truth is surprisingly small. Chapter V, "The Board on which the Game is Played" is wholly admirable as a unique exposition of the theory of rent. It is written as "a Fragment of an Ancient Manuscript," and will not only bring enlightenment to the student, but many a smile to the grey-haired professor. We hope the author will have another inspiration and give us international trade, or currency and prices, in the same delightful vein.

Commercial Arithmetic and Accounts. BY H. H. GREEN and T. FRANKLIN. London: Macmillan and Co., Ltd. 1920. pp. xi, 337, xxxiv. Price in England 6s.

This is the best text-book we have seen on commercial arithmetic. It is practical and comprehensive, and the explanations are in most cases quite full enough to relieve the teacher of a good deal of work. Part I contains the elements of arithmetic and book-keeping; Part II deals with Accounts; Part III is advanced arithmetic—geometrical progression, compound interest and annuities, sinking funds, square and cube roots, and the use of logarithms. We think more attention should have been given to foreign exchanges, and to the construction and use of ready reckoning and calculating tables. The description of commercial documents and their uses (*e.g.*, cheques, bills of exchange, etc.) is very useful; but it is a pity that the authors when they come to the graphic presentation of statistics, which it is pleasing to find included, have drawn a diagram with a false base-line (p. 304). The book may be strongly recommended for use in India in commercial classes for diplomas. It would be very useful too if B.A. students in economics were made to work through most of this book; for it would give them a thorough grounding in many of the facts of which they are painfully ignorant, and would polish up their rather scanty knowledge of the arithmetic of percentages, exchange calculations and compound interest. We should welcome an Indian edition of this book with examples in rupee currency and using Indian measures of weight and area.

PRINCIPAL CONTENTS OF AMERICAN JOURNALS¹

THE JOURNAL OF POLITICAL ECONOMY

MARCH, 1919

- Labor Administration in the Shipbuilding Industry during War Time: I*, by P. H. DOUGLAS and F. E. WOLFE.
Food Control and Price-Fixing in Revolutionary France: II, by HENRY E. BOURNE.

APRIL, 1919

- The Industrial Outlook*, by H. L. REED.
The War Housing Program and its Future, by CURTICE N. HITCHCOCK.
Reconstruction and Natural Resources, by RAPHAEL ZON.

MAY, 1919

- What shall we do with the Railroads?* by JAMES D. MAGEE.
Farm Products and Cost Accounting, by H. J. DAVENPORT.
Labor Administration in the Shipbuilding Industry during the War: II, by P. H. DOUGLAS and F. E. WOLFE.

JUNE, 1919

- The Work of the Wage-Adjustment Boards*, by ALEXANDER M. BING.
The American Automatic Tool, by ERNEST F. LLOYD.
The Place of Agriculture in Modern Industrial Society: I, by EDWIN G. NOURSE.

JULY, 1919

- The Webb Law, its Scope and Operation*, by WILLIAM NOTZ.
Plant Administration of Labor, by PAUL H. DOUGLAS.
The Place of Agriculture in Modern Industrial Society: II, by EDWIN G. NOURSE.
Commercial Banking and Capital Formation, by MYRON W. WALKINS.

¹The Editor regrets that owing to the high cost of paper it has been necessary to reduce the size of this number of the Journal. It is only possible, therefore, to give the contents of those journals which are not generally accessible in India.

OCTOBER, 1919

- Problems of Budgetary Reform*, by HENRY C. ADAMS.
War-Time Industrial Employment of Women in the United States, by A. B. WOLFE and HELEN OLSON.
American Trade Unionism and the Standardization of Wages during the War, by GEORGE E. BARNETT.
War Finance and the rice Level, by H. G. MOULTON.

NOVEMBER, 1919

- Intensive Industrial Training Under Government Auspices in War Time*, by A. B. WOLFE.
Accounting as an Administrative Aid, by J. O. MCKINSEY.
Will Prices Fall? by H. G. MOULTON.

DECEMBER, 1919

- The Management of Labor*, by SUMNER H. SLICHTER.
The Marine Worker's Affiliation of the Port of New York, by BENJAMIN M. SQUIRES.
An Assesment Roll for the Income Tax, by CARL C. PLEHN.

THE AMERICAN ECONOMIC REVIEW

MARCH, 1919

- The Procedure of Contemporary Railroad Reorganisation*, by ARTHUR S. DEWING.
The War-Tax Paradox, by H. J. DAVENPORT.
Price Fixing in a Competitive Industry: A Pioneer Case, by LEWIS H. HANEY.
The Federal Farm Loan System, by GEORGE E. PUTNAM.
Labor Turnover, by GEORGE J. EBERLE.

JUNE, 1919

- The Revenue Act of 1918*, by ROY G. and GLADYS C. BLAKEY.
Consideration of the Proposal to Statilize the Unit of Money, by G. H. KNIBBS.
Rejoinder by Professor IRVING FISHER.
An American Standard of Value, by D. J. TINNES.
Agriculture in Early Latium, by TENNEY FRANK.
The Purpose Achieved by Railroad Reorganization, by ARTHUR S. DEWING.
Communication: Experimental Definitions, by D. J. TINNES.

SEPTEMBER, 1919

- Protection of Piece Rate*, by CHARLES W. MIXTER.
Organization, Distribution and Wages, by HERBERT FEIS.
Theories and Tests of Monopoly Control, by C. J. FOREMAN.
Statistics of Income, by EDWIN R. A. SELIGMAN.
Are Stock Dividends Income? by EDWIN R. A. SELIGMAN.

DECEMBER, 1919

- An Adventure in State Insurance*, by A. J. PILLSBURY.
Suppression and Non-Working of Patents, by F. L. VAUGHAN.
American Minimum Wage Laws at Work, by D. W. DOUGLAS.
The Cost of the War and How it was met, by E. R. A. SELIGMAN.
The Income Tax as Applied to Dividends, by CARL C. PLEHN.
Extent of Organisation in the Women's Garment Making Industries of New York, by HARRY BEST.

QUARTERLY JOURNAL OF ECONOMICS

FEBRUARY 1919

- Price-Fixing as seen by a Price-Fixer*, by F. W. TAUSSIG.
The Burden of War and Future Generations, by A. C. PIGOU.
Wage Theory and Theories, by H. J. DAVENPORT.
The Taxation of Luxuries and the Rate of Interest, by A. F. MCGOUN.
War Labor Policies and their Outcome in Peace, by L. B. WEHLE.
Four Labor Programs, by T. N. CARVER.

MAY, 1919

- The Relations of Recent Psychological Developments to Economic Theory*, by Z. CLARK DICKINSON.
Latin American Foreign Exchange and International Balances during the War, by JOHN H. WILLIAMS.
Positive Contributions of Scientific Management, by HENRY H. FARQUHAR.
Indebtedness of Principal Belligerents, by LOUIS ROSS GOTTLIB.
The Iron-Ore Problem of Lorraine, by ABRAHAM BERGLUND.

AUGUST, 1919

- Federal Operation of Railroads during the War*, By F. H. DIXON.
Normal Price as a Market Concept, By E. G. NOURSE.
On Stabilizing the Dollar, by EDWARD T. PETERS.
Government Control of Sugar during the war, by JOSHUA BERNHARDT.
 Also Review of WALSH'S *The Climax of Civilisation, Socialism, and Feminism*.

NOVEMBER, 1919

- The Present and Future of the International Trade of the United States*, by F. W. TAUSSIG.
Railroad Valuation by the Interstate Commerce Commission: I, By HOMER B. VANDERBLUE.
British Industry and the American Embargo, by L. M. SEARS.
A Division among Theorists in their Analysis of Profits, By C. J. FOREMAN.
Price-Fixing and the Theory of Profit, by KEMPER SIMPSON.
Debts, Revenues and Expenditures, and Note circulation of the Principal Belligerents, by LOUIS ROSS GOTTLIEB.

**BALANCE OF THE GOLD STANDARD RESERVE IN INDIA AND IN
ENGLAND ON THE LAST DAY OF EACH MONTH**

Held in the following form	28th February 1919	31st March 1919	30th April 1919
	£	£	£
1. Gold in India ...	...	...	...
2. Cash placed by Sec. of state at short notice	6,014,430	6,015,672	6,054,761
3. British and Colonial securities (value as on 30th Sept., 1918) ...	18,857,102	29,729 505 (31st March 1919)	28,209,257
4. Securities since purcha- sed (at cost price)	10,649,168	Nil	1,822,015
TOTAL ...	35,520,700	35,745,177	36,086,033

**BALANCES HELD IN CASH IN THE GOVERNMENT CIVIL TREASURIES
AND AT CREDIT OF GOVERNMENT IN THE PRESIDENCY BANKS AND
THEIR BRANCHES—BANK RATES—EXCHANGE—SILVER, ETC.**

Year	28th February	31st March	30th April
	Rs.	Rs.	Rs.
1917 ...	19,59,37,000	22,94,41,000	24,72,64,000
1918 ...	25,18,83,000	22,91,95,000	17,50,00,000
1919 ...	19,19,24,000	25,64,76,000	21,67,66,000

	28th Feb. 1919	31st March 1919	30th April 1919
<i>Bank Rates</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>
Bank of Bengal ...	7	6	6
Do. Bombay ...	7	6	6
Do. Madras	8	8	7
Do. England ...	5	5	5
<i>Exchange Rates</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. p.</i>
On Demand ...	1 6 $\frac{1}{32}$	1 6 $\frac{1}{32}$	1 6 $\frac{1}{32}$
Telegraphic Transfer ...	1 5 $\frac{31}{32}$	1 5 $\frac{31}{32}$	1 5 $\frac{31}{32}$
3 Months ...	1 6 $\frac{11}{32}$	1 6 $\frac{11}{32}$	1 6 $\frac{11}{32}$
6 Months' ...	1 6 $\frac{11}{32}$	1 6 $\frac{21}{32}$	1 6 $\frac{21}{32}$
Government paper (3½ p.c.)	73-14	70 to 70-2	70-14
Bar Silver in London ...	47 $\frac{3}{4}$ d	47 $\frac{3}{4}$ d	48 $\frac{3}{4}$ d

BALANCE OF THE GOLD STANDARD RESERVE IN INDIA AND IN
ENGLAND ON THE LAST DAY OF EACH MONTH

31st May 1919	30th June 1911	31st July 1911	31st August 1919	30th September 1919
£	£	£	£	£
...
6,000,080	6,014,842	6,016,604	148	188
27,886,902	26,812,421	26,652,225	26,652,225	36,444,219 (on 30th Sept. 1919)
2,232,370	3,408,457	3,591,631	9,789,204	...
36,119,352	36,235,720	36,260,460	36,436,582	36,444,407

BALANCES HELD IN CASH IN THE GOVERNMENT CIVIL TREASURIES
AND AT CREDIT OF GOVERNMENT IN THE PRESIDENCY BANKS AND
THEIR BRANCHES—BANK RATES—EXCHANGE—SILVER, ETC.

31st May	30th June	31st July	31st August	30th September
Rs.	Rs.	Rs.	Rs.	Rs.
32,48,70,000	39,60,52,000	35,96,31,000	26,48,44,000	20,76,43,000
19,95,93,000	23,21,37,000	16,20,54,000	14,92,88,000	27,64,95,000
16,22,01,000	16,49,84,000	15,55,92,000	16,77,54,000	14,18,41,000
31st May 1919	30th June 1919	31st July 1919	31st August 1919	30th Sept. 1919
per cent	per cent	per cent	per cent	per cent
6	5	5	5	5
6	5	5	5	5
7	6	6	6	6
5	5	5	5	5
s. d.	s. d.	s. d.	s. d.	s. d.
1 8 $\frac{1}{32}$	1 8 $\frac{1}{32}$	1 8 $\frac{1}{32}$	1 10 $\frac{1}{32}$	2 0 $\frac{5}{16}$
1 7 $\frac{31}{32}$	1 7 $\frac{31}{32}$	1 7 $\frac{31}{32}$	1 9 $\frac{31}{32}$	2 0 $\frac{1}{2}$
1 8 $\frac{3}{8}$	1 8 $\frac{3}{8}$	1 8 $\frac{3}{8}$	1 10 $\frac{7}{16}$	2 0 $\frac{1}{16}$
1 8 $\frac{11}{16}$	1 8 $\frac{11}{16}$	1 8 $\frac{11}{16}$	1 10 $\frac{13}{16}$	2 1 $\frac{5}{8}$
69-8 to 69-12	70 to 70-2	68-4 to 68-8	68-6 to 68-10	66-8
52 $\frac{1}{2}$ d	53 $\frac{1}{2}$ d	—d	58 $\frac{3}{4}$ d	62 $\frac{1}{2}$ d

**BALANCE OF THE GOLD STANDARD RESERVE IN INDIA AND
IN ENGLAND ON THE LAST DAY OF EACH MONTH**

Held in the following form	31st October 1919	30th November 1919	31st December 1919
	£	£	£
1. Gold in India ...	...	...	...
2. Cash placed by Sec. of state at short notice	82	27,093	969
3. British and Colonial Securities (value as on 30th Sept. 1918)	30,04,430	30,044,430	29,993,826
4. Securities since pur- chased (at cost price)	6,617,299	6,617,299	6,805,978
Total ...	36,661,811	36,688,822	36,800,778

**BALANCES HELD IN CASH IN THE GOVERNMENT CIVIL TREASURIES
AND AT CREDIT OF GOVERNMENT IN THE PRESIDENCY BANKS AND
THEIR BRANCHES—BANK RATES—EXCHANGE—SILVER, ETC.**

Year	31st October 1919	30th November 1919	31st December 1919
	Rs.	Rs.	Rs.
1917 ...	18,58,27,000	16,50,05,000	16,81,19,000
1918 ...	16,92,06,000	13,68,41,000	14,72,60,000
1919 ...	18,76,15,000	19,53,38,000	14,06,44,000
1920 ...			
<i>Bank Rates</i>	31st October 1919 <i>per cent</i>	30th Nov. 1919 <i>per cent</i>	31st Dec. 1919 <i>per cent</i>
Bank of Bengal ...	5	5	5
Do. Bombay ...	5	5	5
Do. Madras ...	6	6	6
Do. England ...	5	6	6
<i>Exchange Rates</i>	s. d.	s. d.	s. d.
On Demand ...	2 0 $\frac{5}{16}$	2 3 $\frac{3}{16}$	2 4
Telegraphic Transfers ...	2 0 $\frac{1}{2}$	2 3 $\frac{1}{8}$	2 3 $\frac{5}{16}$
3 Months' ...	2 0 $\frac{13}{16}$	2 1 $\frac{13}{16}$	2 4 $\frac{3}{4}$
6 Months' ...	2 1 $\frac{3}{16}$	2 1 $\frac{8}{16}$	...
Government paper (8½ p.c.)	66-8 to 66-14	...	Market closed
Bar Silver in London ...	64½d	75½d	76½d

**BALANCE OF THE GOLD STANDARD RESERVE IN INDIA AND
IN ENGLND ON THE LAST DAY OF EACH MONTH**

31st January 1920	29th February 1920	30th March 1920	30th April 1920	31st May 1920
£	£	£	£	£
...
196	911	551	8,469	140
29,905,982	15,813,904	86,343,616 on 31st March 1920	30,485,278	24,816,470
6,920,788	21,230,976	...	6,143,550	11,821,100
36,826,916	37,045,891	36,344,167	36,632,297	36,637,810

**BALANCES HELD IN CASH IN THE GOVERNMENT CIVIL TREASURIES
AND AT CREDIT OF GOVERNMENT IN THE PRESIDENCY BANKS AND
THEIR BRANCHES—BANK RATES—EXCHANGE—SILVER, ETC.**

31st January	29th February	30th March	30th April	31st May
Rs.	Rs.	Rs.	Rs.	Rs.
18,63,40,000	29,18,46,000	26,44,55,000	25,40,24,000	28,47,40,000
22,87,44,000				
15,75,96,000				
29,19,45,000				
31st Jan. 1920 per cent	29th Feb. 1920 per cent	31st March 1920 per cent	30th April 1920 per cent	31st May 1920 per cent
5	7	7	7	7
6	7	7	9	8
6	8	8	9	9
6	6	6	7	7
s. d.	s. d.	s. d.	s. d.	s. d.
Nominal	2 7 $\frac{5}{16}$	2 3 $\frac{7}{8}$	2 3	2 1 $\frac{3}{4}$
2 5 $\frac{1}{2}$	2. 7 $\frac{1}{2}$	2 3 $\frac{3}{4}$	2 3 $\frac{3}{8}$	2 1 $\frac{1}{4}$
Nominal	2 8 $\frac{1}{2}$	2 4 $\frac{3}{4}$	2 4 $\frac{3}{8}$	2 3
Nominal	...	...	...	...
61-2	58-14	Rs. 59	59 $\frac{1}{2}$	59
82 $\frac{1}{2}$ d	82 $\frac{3}{4}$ d	71 d	67 d	57 $\frac{1}{2}$ d

ABSTRACT OF THE ACCOUNTS OF THE DEPARTMENT OF ISSUE
OF PAPER CURRENCY, 1919-20

	28th February 1919	31st March 1919	30th April 1919
	Rs.	Rs.	Rs.
Total amount of notes in circulation ¹	1,53,60;31,281	1,53,46;47,790	1,54,41;39,870
Deduct ² ...	2,11;96,770	—	69,33;245
RESERVE			
Coin and Bullion ...			
<i>In India :—</i>			
Silver Coin ...	13,49;51,387	16,66;11,656	18,01;00,458
Gold coin and Bullion	18,14;10,472	17,36;99,120	14,55;45,581
Silver Bullion under coinage ...	10,16;67,581	15,69;11,722	16,72;51,510
<i>In England :—</i>			
Gold coin and Bullion	12;35,865	12;35,865	(In His Majesty's Dominions 1,50;00,000) (In transit between India, England and His Majesty's Dominion 1,50;00,000)
Silver Bullion held in the U.S.A. and in transit therefrom	10,97;78,185	5,04;05,185	2,85;12,685
Securities (at purchase price) :—			
Held in India ...	16,07;99,946	16,07;99,946	16,07;99,946
Held in England ...	82,49;88,075	82,49;84,296	82,49;96,445
Total Reserve ...	1,51,48;34,511	1,53,46;47,790	1,53,72;06,625
Deduct ³ ...	—	—	—
Net Total Reserve ...	1,51,48;34,511	1,53,46;47,790	1,53,72;06,625

1 Figures to the left of the semi-colon indicate the number of lakhs.

2 Deduct—Withdrawn from circulation by Foreign circles, and in course of remittance to circles of Issue.

3 Deduct—Amount due on Bills drawn by one circle on another.

ABSTRACT OF THE ACCOUNTS OF THE DEPARTMENT OF ISSUE
OF PAPER CURRENCY, 1919-20

31st May 1919	30th June 1919	31st July 1919	31st August 1919	30th September 1919
Rs.	Rs.	Rs.	Rs.	Rs.
1,55,17,62,880	1,62,76,31,044	1,67,11,50,893	1,68,92,27,675	1,71,86,34,708
—	—	—	—	—
19,60,51,041	23,54,66,891	28,49,13,618	31,48,01,738	34,34,88,930
16,10,97,415	17,69,15,024	19,13,25,410	19,26,24,693	18,44,51,078
19,38,18,583	20,94,54,583	20,91,14,139	19,50,85,940	16,62,25,797
—	—	—	[Gold Coin and Bullion in transit between India, England and His Majesty's Dominions]	[In His Majesty's Dominions 1,53,704]
[In transit between India, England and His Majesty's Dominions 1,50,00,000]	2,00,00,000	—	9,22,527	1,98,50,000 [In transit between India, England and His Majesty's Dominions 91,72,528]
16,07,99,946	16,07,99,946	16,07,99,946	16,07,99,946	17,02,99,946
82,49,95,845	82,49,94,600	82,49,97,780	82,49,92,831	82,49,92,725
1,55,17,62,880	1,62,76,31,044	1,67,11,50,893	1,68,92,27,675	1,71,86,34,708
—	—	—	—	—
1,55,17,62,880	1,62,76,31,044	1,67,11,50,893	1,68,92,27,675	1,71,86,34,708

ABSTRACT OF THE ACCOUNTS OF THE DEPARTMENT OF ISSUE
OF PAPER CURRENCY, 1919-20

	31st Oct. 1919	30th Nov. 1919	31st Dec. 1919
	Rs.	Rs.	Rs.
Total amount of notes in circulation ¹	1,75,29;05,072	1,79,66;93,800	1,82,91;09,837
<i>Deduct</i> ² ...	...	...	...
RESERVE			
Coin and Bullion ...			
<i>In India :—</i>			
Silver coin ...	35,58;76,818	32,84;15,679	29,64;27,148
Gold coin and Bullion	19,25;47,039	23,53;52,920	29,60;54,902
Silver Bullion under coinage ...	15,32;89,402	14,60;35,591	14,08;08,895
<i>In England :—</i>			
Gold coin and Bullion	...	51;00,000 [Gold Coin and Bullion in His Majesty's Dominions 48;00,000]	4,29;00,000
Silver Bullion held in the U.S.A. and in transit therefrom (Also Gold Coin)	5,57;42,611	4,60;00,000	92;00,000
	[In transit between India, England and His Majesty's Dominions] 1;53,705	[In transit between India, England and His Majesty's Dominions] 3,56;95,912	[In transit between India, England and His Majesty's Dominions] 4,89;31,890
Securities (at pur- chase price) :—			
Held in India ...	17,02;95,551	17,02;99,946	17,02;99,946
Held in England ...	82,49;89,987	82,49;93,752	82,49;87,556
Total Reserve ...	1,75,29;05,072	1,79,66;93,800	1,82,91;09,837
<i>Deduct</i> ³ ...	—	—	—
Net Total Reserve ...	1,75,29;05,072	1,79,66;93,800	1,82,91;09,837

1 Figures to the left of the semi-colon indicate the number of *lakhs*.

2 Deduct—withdrawn from circulation by Foreign circles, and in course of remittance to circles of Issue.

3 Deduct—Amount due on Bills drawn by one circle on another.

FINANCIAL STATISTICS

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ABSTRACT OF THE ACCOUNTS OF THE DEPARTMENT OF ISSUE OF PAPER CURRENCY, 1919-20

31st January 1920	29th February 1920	31st March 1920	30th April 1920	31st May 1920
Rs.	Rs.	Rs.	Rs.	Rs.
1,85,14,79,265	1,88,02,75,995	1,74,52,45,960	1,70,73,88,958	1,66,91,81,442
—	—	—	—	—
28,38,32,036	29,84,81,612	33,21,91,696	33,80,84,076	37,09,97,103
35,10,13,825	41,29,89,956	44,36,53,445	45,37,53,803	42,85,69,142
11,94,48,663	9,13,72,227	6,63,25,959	5,56,51,932	4,26,54,951
8,36,32,669	—	—	—	—
[In His Majesty's Dominions 2,98,00,000]	—	—	—	—
—	—	—	—	—
[In transit between India, England and His Majesty's Dominions] 5,28,00,000	[In transit, etc.] 4,64,90,223	[In transit, etc.] 3,44,71,947	[In His Majesty's Dominions] 95,00,000	In transit, etc. 74,69,617
15,59,54,948	15,59,54,946	19,58,54,946	23,76,54,916	31,17,54,916
82,49,97,126	82,49,87,031	67,27,47,967	61,27,44,201	50,77,35,683
1,85,14,79,265	1,88,02,75,995	1,74,52,45,960	1,70,73,88,958	1,66,91,81,442
—	—	—	—	—
1,85,14,79,265	1,88,02,75,995	1,74,52,45,960	1,70,73,88,958	1,66,91,81,442

BOOKS RECEIVED

RELATING TO INDIA

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- Indian Finance and Banking.* By G. FINDLAY SHIRRAS. Macmillan & Co. London: 1919 pp. xii, 495. Price 18s.
- Notes on Economic History of Early India.* By J. N. SAMADAR. Reprint from Journal of Behar & Orissa Research Society. pp. 30.
- A Novel Method of Redemption of Land Revenue with a System of Financing Industries.* by Rai Bahadur Ganga Ram, C.I.E. Reprint from 'East & West' pp. 12.
- 'Commerce and Industries' for July 1919. Published by G. Narasimham. Madras pp. 36.
- Patna College Chanakya Society, Ninth Annual Report. (1918-19.)* Kuntaline Press. Calcutta. 1920. pp. 123.
- The activities of the Patna College Chanakya Society continue at the high level of efficiency which Characterised this society in the past, In addition to the usual family Budgets and village Surveys we find Reports on the Tata Iron and Steel Works at Jamshedpur and on the Serampore Colliery at Giridih which are of great interest to the students of Economics.
- Bulletins of the Indore Christian College, Nos. 3 & 4.* Christian College. Indore: 1920 pp. 35 & 33.
- The Bulletin No. 4 has interesting articles of economic importance, such as the expense of bringing up a child to the age of ten years; the economic condition of a village, the flour mill at Indore, Water as a limiting factor in Malwa Agriculture, and the "Know your Town" Exhibit.
- Report of Baroda Economic Development Committee.* Times Press. Bombay: 1920. pp. xi, 197. Price Rs. 3.
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- The Flow of Value,* By L. G. MCPHERSON. The Century Co. New York: 1919. pp. xi, 473.
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ESSENTIALS OF SOCIOLOGY IN RELATION TO ECONOMICS

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(Continued from page 56)

X

In the opening discussion there were a good many threads: for social structure, even among the simplest peoples, let alone ourselves, is a web more complex than any sociologists, or all together, have yet clearly enough unravelled so as to know the pattern. But we have at least made a clear start, if we are agreed that the social sciences cannot rest content with any tissue of abstractions, nor even with the concrete play of physical energies upon matter, as in production and manufactures, exports and commerce. Still less with any subtle abstract, however mathematically entrancing, of modern commercial and financial specialisms of exchange. For society is a complex web of life, including all these and far more.

Furthermore, we have seen that life—that vast general concept which for the evolutionist embraces

all life's manifestations, from a foam-plasm to the utmost evolution of cities—is neither simply explicable in physico-chemical terms, as the “mechanist” physiologist thinks it will be, nor yet is it the mysterious and insoluble “*x*” which his vitalist critic retreats upon. Our thesis is that life is so far intelligible; (1) in biological terms, of relation between Environment and Organism, as Function; and (2) in social terms strictly parallel, of relation of Place and Folk, as Work. Hence alike as an essential summary of the preceding section of this paper, and for its continuation, it is convenient here to reprint our main diagram.

LIFE

ENVIRONMENT FUNCTION ORGANISM

PLACE

WORK

FOLK

(GEOGRAPHY) (ECONOMICS) (ANTHROPOLOGY)

ENVIRON- MENT		PLACE		GEO- GRAPHY	
	FUNCTION	==	WORK	==	ECONOMICS
		ORGANISM		FOLK	ANTHRO- POLOGY

The above repeats the formula of page 40; with spaces for the development of the minor squares, which we saw to be logically necessary, and even illumina-

ting. This elemental chord of life will now be taken as indisputable so far as it goes; and as carrying with it its minor chord, as already set down in figure 3 (page 42). But all this, of course, is but a beginning. What next? Obviously it is time to be considering this life-concept on its psychological side.

The economist has always been something of a psychologist, and of late increasingly; but his psychology has been limited; and this mainly to the hungers, the desires, the "wants" by which he has been wont to explain man's economic activities, and to the balancing of the "pleasures and pains" of his hedonic calculus. But even if such old and simplified psychology satisfy him, it is not enough for the psychologist, and still less for the sociologist. For the former has long had his psycho-physical laboratory, his "experimental psychology department;" while the latter is compelled to take note of man's mind in its fullest complexities, and he ever seeks to unravel these to learn the pattern of their weaving. Let the economist then consent to visit these two schools of psychology along with us, and see in the first place, and to begin with, what may be learned in each towards a fuller understanding of our organic life, and of our social life as well. For if we can thus learn something, the economist's traditional psychology may be so far justified, so far developed; and he surely cannot reasonably object to either.

Entering then the experimental psychologist's laboratory, with its formidable array of instruments, we ask him—"What can you teach us?" He replies "We can test and increasingly measure and compare your senses, your feelings, your direct experiences, and so give you some better understanding of them".—"Very interesting" we reply, "but how are we to understand you? We know of environment and organism, and of

function between them; we know of place and folk, and of work between them; in fact we are a party of students, at first conventionally trained in geography, anthropology and economics, when they were supposed to be separate and distinct sciences, progressing essentially through their division of labor, into sub-specialisms 'without end. But now we have got a fresh idea, one from old times perhaps, but still comparatively new for us, that of their harmony, in sociology; within which we are now associating all these studies. So we came in to ask if you can help us with your psychology."

"But we psychologists do not know or care about your geography, your economics, or your anthropology; nor do we experiment upon society. Do you not know that this is the University of Watertight, built properly in separate Departments? You may come and work in this one if you please; but you must leave your old studies in theirs; we have no room here for your globes and atlases, your skulls or weapons, still less for markets and exchange."

We retire discomfited for the moment. But on reflection the geographer says to his fellows—"Senses; five senses—but it is with these that I explore my environment, and that I have come to anything I know about places." And the anthropologist—"I have got beyond measuring skulls and collecting weapons; my interest in my science is really at the bottom a feeling of interest in people." Then the economist—"My experience of labor and production and markets and so on, is also something organic, and psychological too—from my technological experiences to my hedonic ones."

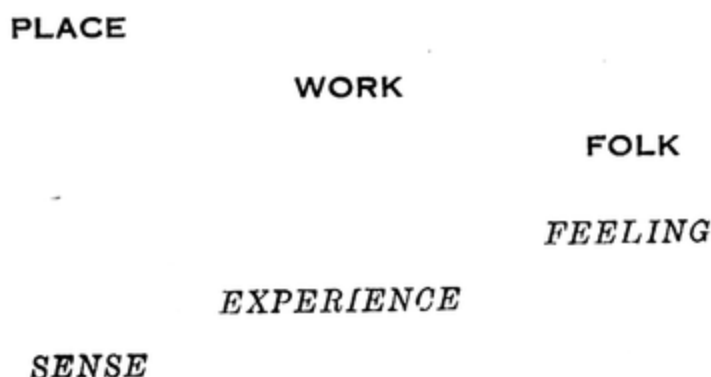
And as we think and talk over this elemental psychology of ours, this whole set of ideas comes together. Our chord of life is not simply biological, of

environment, function and organism; nor is it simply social, of place, work and folk. It is at the same time psychological; of sense, experience, feeling; and this for organic man and social man alike—in fact:—

ENVIRONMENT	FUNCTION	ORGANISM
or	or	or
PLACE	WORK	FOLK
SENSE	EXPERIENCE	FEELING

These are obviously all interacting; since we have to apply our senses better to observe our place, apply our experience better to do our work, and our feelings to know our people. Even the psychologist will be himself none the worse for applying our simple working psychology to our phenomena; in fact he is often doing this, and so becomes ready and willing to apply his instruments to our practical purposes, as Munsterberg's and other "efficiency" experiments admirably show.

Let us now place all this graphically:—



Recall now the diagram of Place, Work, Folk on page 42 with its developments (1) of Place, as work.

Place and folk-Place (2) of Work, as place-Work and folk-Work (3) of Folk, as place-Folk and work-Folk; with the fuller explanations of these, which were there given.

Now the elements of this second triad—that of Sense, Experience and Feeling—also compound with and qualify each other; and so they develop, like the first set, into minor triads, and thus also into nine squares. These are next seen to be paired exactly to the former nine throughout.

PLACE	PLACE-WORK	PLACE-FOLK
WORK-PLACE	WORK	WORK-FOLK
FOLK-PLACE	FOLK-WORK	FOLK
<i>FEELING- SENSE</i>	<i>FEELING- EXPERIENCE</i>	FEELING
<i>EXPERIENCED SENSE</i>	EXPERIENCE	<i>EXPERIENCED FEELING</i>
SENSE	<i>SENSED EXPERIENCE</i>	<i>SENSED FEELING</i>

XI

It takes a little thought and patience to realise the meaning of these compounds. Nature knowledge comes through our nature observation. But is it not in our work-Place, whatever that be, that we gain experienced sense? In recognising our old folk-Place, have we not some feeling along with our sense?—is this not the very meaning of “home”?—in other words, folk-Place, with feeling-sense, is its definition

and formula. Our geography is thus becoming not only practically developed, but humanised.

Turn now to the anthropologists' column; geography is already implied in place-Folk; but to observe and know them well needs sense along with feeling. And to understand them and how they live, our mere feeling, however warm, needs also experience of and with them, as work-Folk. Our anthropology thus develops. So the economist, no longer abstract, generalises his Experience, statistical, monetary, and what not, from the real Work of real people, conditioned by their given place. And more, this work is always and everywhere, place-Work, from primitive mine to elaborated money-market. Hence its experience is really observant, as sensed Experience, and thus it becomes technological, and economic indeed. Work-process and work-Experience thus involve fuller survey, and on either hand, thus:—

WORK-PLACE	WORK	WORK-FOLK
<i>Experienced Sense</i>	<i>EXPERIENCE</i>	<i>Experienced Feeling</i>

Is it not now becoming recognised that there is no way short of this thoroughness of survey for the economist? Nor similarly can he avoid looking into folk-Place, and folk-Work. These at once evoke a feeling-Sense, and a feeling-Experience, in concrete detail: for now we recognise these, the latter especially as the real stuff of what economists in the past have too vaguely and cheaply generalised into the formulas of "pleasure and pain" not really enough felt. For when we look closely into such matters, we see there is no escape from trying to understand the place and work, and the folk; and if so, in all their relations. Hence we

can be no longer satisfied with general terms like "Land" and "Labor", "Capital," "Wealth," and the rest, left in the too vague generality: we are now at the outset of a real social survey—nothing short in fact of Le Play's "*Monographies des Ouvriers Européens*", and even more. The economist, whatever else he may or may not enquire into, if he is to aim at sociological realism can no more deny this task of his science—to monograph all types of labor over all the world—than can the geographer ignore exploration for all places, or the ethnographer or other naturalistic observer ignore the survey of all characteristic types of human and other life. But all this brings out the sharp contrast between any ordinary European Economic journal, and "*La Science Sociale*", which latter has been so long ignored, but may now be profited by.

It will be replied, and so far justly, that our modern economic journals now contain such surveys, as of folk-Place (and in its full content) in "*Family Budgets*" for main example; and these especially since Booth's classic volumes, his *Survey of London*. Here too Indian economists have not been idle. But all a generation late, and as yet not so fully, nor so thoroughly; whereas we need surveys more comprehensive still, in barest outlines indicated here. Our survey of work-Place increasingly aims at including its whole material equipment, "fixed capital" (and "fluid" energies as well). With folk-Place comes in the whole of real wages," not mere bare walls of housing. There is no stopping short, even for efficiency of labor, of the whole environment needed for the fullness of civilised and productive life.

Short of these economic requirements our surveys cannot stop, if aiming at sociological completeness; and short of this though in practice we may fall, yet the

aim remains, and so the survey improves. Its comprehensiveness grows, even as we look into these dry tabular outlines. Thus the squares of Place, work-Place, and folk-Place are seen to demand nothing short of City Survey in clearness of observation, and of Town-planning and construction in definiteness of practice.

XII

Next place-Work; meaning Work as determined by natural (and later) place conditions. What vast content does not this open? That is if the economist is really to investigate this, with fully sensed observant experience, up to the standard of geographer and anthropologist, and no longer be satisfied with his too general terms of "natural conditions" or "natural advantages?" Let us outline these clearly, as these sciences see them, and thus concretely, as "Valley Section" of this real world of ours, and in its relief, from mountains to sea.

We must observe and think in relief. And so take note of more than relief merely; but of its associated climates, and all else. First its geology, and petrography, its mineralogy; since, as we agreed at the outset, this group of natural sciences, and our corresponding economic activities, have grown up together, from earliest ages of flint and gold, of bronze and iron, to our coal and steel. Its botany too, of herbs and shrubs and trees, of weeds and flowers, of fruits and seeds (with drugs and spices and fibres); and its (plant-determined) zoology as well, of beasts and birds, even fishes, and more. For among all kinds of life have not men ever been finding new economic allies or enemies: witness the insects of silk and carmine splendours to those of mortal diseases, and beyond them even the microbes, of bread or poison, of fertility or of death. * It is thus but a shallow view which speaks of man's "Domesticated Animals" and

his "Cultivated Plants." For these have reacted on man and determined his essential type and mode of life. In every country which the anthropologist and economist can survey, we soon come to see how these animals have domesticated man, and how these plants have cultivated him.

Thus the shepherd is not merely a sheep-maintained man. The "good shepherd," in every sense from simplest onwards, is a sheep-educated man; and the true patriarch of old, or the truly "Christian Christian," is lamb-educated. So the Indian is not only conspicuously cow-maintained, ox-maintained, by milk and plough, so that Gaikwar (cow-herd) has become a ruler's title, but more: his ancient culture-aristocracy of Brahmins are cow-educated, *par excellence*. Chivalry, whether of West or East, has ever been with the horse. And the historic civilization and spread of Islam arose not simply from the vast unity of the desert, but from the caravan this imposes; so that it is by no strange chance or hidden choice of fate, but from the essential order of things, that its prophet was a caravan-leader, at once disciplining his camelry, and inspiring them.

And so it has been also with the plant world. For instance take wheat and rice. These are not merely the different "cereals" or "commodities" which Western botany and economics so simply call them. Nor are they only of the different values, physiological and monetary, with which these two dis-specialisms have so long each been content to focus a complementary eye. They express widely different civilization values; with the different types of labor they require, respectively individualistic and communitary, there have arisen different types of family, and thence of resultant institutions, customs and laws. Even correspondingly contrasted views of morals accordingly, and thus differ-

ent manners. And each and all good, because life-developing, in their own distinctive ways. "Place, Work, People"—there is evidently much more in this formula, say rather this chord of life, than is yet commonly recognised, in most of our economic and social teaching.

In such ways then, we study nature and man as well; Place and place-Folk together. The miner searching out his flints or ores, the woodman hewing for fuel or for timber, the hunter on his quest of game the shepherd with his flock, the fisher along the stream, and thence out to sea, are not simply the old pioneers of civilization; they are persistently making and maring it more than ever, with their modern developments especially. So the hunter with his game, the shepherd with his flock the peasant with his corn, represent no mere "phases" of the traditional formula of an early anthropology, too cheaply adopted by economists, whose "hunting, pastoral and agricultural stages" used to be so lightly outlined, as so many substantially superseded steps of progress, before our urban, mechanical and monetary order of things. For all the modern "division of labor" which this modern economic order presents is but the elaboration of these fundamental and persistent occupations. It is for the economist to trace their essential continuity in nature and origins, throughout all their differentiations and combinations, as from primitive Britons to London of today.

XIII

For, as the geography of all these occupations essentially endures, so with their anthropology. Even their modern economics is but an evolutionary development, their deteriorations and their parasitisms included. Their history, with all these aspects, goes on as well,

and must ever do so. For out of these simple elements our human civilization-developments are everywhere wrought; thus they arise, and often anew from their beginning; and so it ever must be. To work out this in detail is of course a long story, needing a whole volume for adequate outline, and many for exposition; since anthropology, so long specialized among skulls and weapons and now among magics, rituals and mythologies, is too slowly learning the value of this essential occupational key. To supply this key has been the long task of *La Science Sociale*, and even its volumes, and kindred ones, still await further clarification. Herbertson's *Man and his Work*, and Miss Newbigin's little *Geography*, each give us good introductions, but even these somewhat too cautiously, too academically isolated from modern issues.

For what are the modern Warlords, the defeated or the victorious alike, but hunters at their highest and intensest, as hunters of men; and thus concentrating other occupations, themselves often at utmost modern developments, into their ranks and service? And what is the origin of the historic faith of Israel, what of the "Holy Father" at Rome, if not as patriarchal, as good shepherd of men, and "pastor pastorum", and with the tradition of "fisher of men" as well? But since our interests in these pages are more of science and of the arts, who are the inventors but thinking workers, up to Watt, Stephenson, Edison, or whom you will? And so with the men of science. For the foolish Londoner, Kelvin and Lister were Lords, though no doubt a little lower than the brewers. But to the more educated, they were known as successive Presidents of the Royal Society; and in the universities as a couple of old and eminent professors, of physics and surgery respectively. But looking more accurately, Kelvin was Watt's successor as foremost craftsman and master-smith

of Glasgow, and even his literal successor, as scientific instrument-maker in the same college. So Lister was first of all a "barber-surgeon", like his fellows, and the rustic-minded one who revived and applied that old shepherd tradition of tarring the sheep's wound or sore, which since his day has been called "antiseptic surgery." He got his idea from Pasteur, who was at once the foremost chemist, biologist, and medical thinker of his day, because tanner's boy, brought up among antiseptics accordingly; and son too of a peasant mother with "an eye for dirt," which he inherited. His achievements were thus the putting together of both his parents' lore; so that we understand him far better than as a member of many learned academies, when we see him combining these parental outlooks, and all round the farm. For with keen mental eye, as well as with those compound spectacles we call the microscope, he reached the secrets of decay through the agency of microbes; and thus he was able to clean the dairy, the baking brewing, and wine-making too; and to save the sheep and the silkworms from their diseases, and by and by even to solve the mystery of the mad dog, first curing the bitten shepherd and next showing how to stamp out the malady. Thus not simply are the occupational experiences the very stuff and origins of the sciences and of their applications, but the essential ones. It is for lack of these experiences that we have the scholastic, academic and bureaucratic "cram trade" with its examination machinery, and so much other solemn nonsense, and with such poor results accordingly.

Take now politics. Who and what are the great and wonderful men who have so long headed the party game of "Ins and Outs" in every western land, and thus who rule us by turns, these four

generations past? Who but the lawyers, the barristers, the pleaders, whose eloquence has made us all desire to play at jurymen, and so take their "franchise" so seriously as even now we do?

What then is the lawyer: Not a fundamental occupation surely? No; but not far from one. The peasant of all men needs written contracts and enduring records, for his land needs a title, his boundaries need records. His taxes and rents have to be met; his harvest involves annual payments and receipts; so he has his physically least strenuous (but often mentally sharpest) son taught the art of writing down these matters, in Europe appropriately upon calf-skin. The young man thus occupied comes to know the village and its affairs; so he gets other people's business to look after. He attends the village council and follows the case, further perhaps than need be; and thus he gradually develops the associated professions of solicitor and pleader. Hence has gradually developed the active bar, the robed and dignified bench.

But what is politics after all but collective action? And this primarily in our own occupational thought-world and class-interests; for however we may tend (or pretend) to adjust them to those, of others, they mostly limit us to our own section of the community. What occupations learn this first? At first warrior-nobles, and their foremost chief, by and by "king;" but with these also the medicine-man and magician, the augur, and by and by the priest, as the initiator into the mysteries of life. But these all fall behind their times, and fail in adjustment to the present; hence next the lawyer has come to have his turn. And this with the great invention above alluded to, and made in comparatively recent times, that of extending the jury, itself drawn from the public, into the public once more; by the high privilege of extending "franchise" to it,

and then by turns pleading before it the rival interests, of course alike presented to reason with emotion, and with their more material sides as conventionally ignored as may be. That this method has been long and increasingly successful, most recent and present European governments bear witness; yet that other occupations and class-groups are now in their turn seeking power, and increasingly grasping it, is also evident, and needs little illustration here. Take however two minor ones as noncontroversial;—the rise of Medicine, so long a private practice only, of individual doctors for individual patients, but now also collectively, for Public Health; until at length it has forced its way into reluctant ministries, though by them still considered much of “an outsider.” So again with Education; over which, through stress of war, an actual educationalist has for the first time been allowed to preside in England. That Labor is now seeking its turn is year by year more manifest; and that this grows more strong as specific occupations come forward, each with distinctive aims and view-points, like coal-miners and transport-workers, is also obvious; as that these already well nigh compel our discussions of academic economics to take sides in politics.

In such ways, from our simple evolutionary start-point, that of the fundamental nature-occupations, there may be traced the evolution of all the multifarious modern differentiations of labor, expressed in the post-office directories of great cities, up to London itself. And in all these we find that the qualities and limitations of each ancestral occupation are strangely persistent in their remotest modern descendants, or mingled in their frequent combinations, like the crossing of species into hybrids.

XIV

It is needful here to be satisfying the reader, that the schematic outline which preceded these various concrete illustrations can and does really correlate them. Its presentment of life is no mere intellectual game, of three-fold abstractions becoming nine-fold. It is the orderly planning and building of so many windows, each looking directly into the related world of life in its concrete fulness of reality, each directed towards disclosing this and that element and aspect of the social life-process as clearly as may be; and these more clearly in relation than heretofore. We may think, too, of these related window-squares as so many minor frames, in which, in an old pictorial fashion, we set the existing partial presentments so as to make up from their elements a more intellegibly unified whole. Or we may in this way lay-out so many tables, walls, or rooms, arranged so as to make a rational exhibition of social facts and ideas and thus also to be preparing, in its various departmental sections, a rationalized, and no longer mainly alphabetical, encyclopedia of the social sciences. So in the square of Place we set our cosmic models, and reliefs, our maps and atlases and descriptions, even our town plans as well; and in those of work-place and folk-place we set the fuller plans, and planning, of our towns and cities in details. So now let us consider—What have we to put into the square of place-Work?

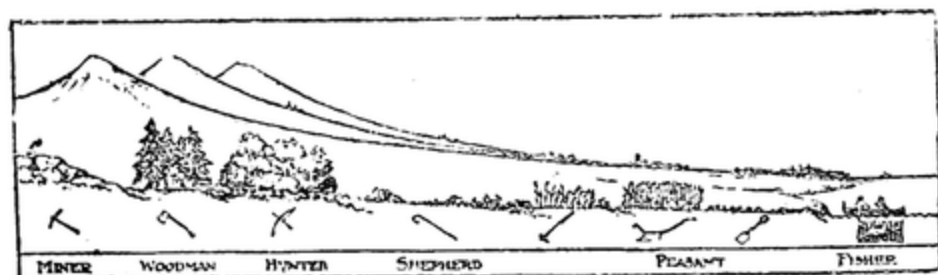
That means—Place as determining Work. We need then some vivid means of condensing and co-ordinating our Regional surveys in this direction. But no longer simply as geographers, as naturalists observing the facts of geology, biology, etc. We are now also, as man has ever been, from the beginning, so many

"prospectors", surveying such national advantages as our geographic survey discloses. And as economists we cannot omit to identify ourselves with all the various occupations concerned, since from these all further economic developments arise, and permanently depend.

XV

Hence then the need of concrete survey, towards full and clear mental imagery of region and city: and we need also a scheme of registering and comparing these with others.

Here then and towards these needs, we offer the "Valley Section"; which has long been serving an increasing body of students and workers, as notably of the "Regional Association", whose growing membership in many different regions, now ranges from



professed sociologists to teachers of secondary and primary schools. It will be seen that it serves as a conspectus of any natural region, great or small. For though at first arising as a graphic summary of nature and labor for the Forth Valley, from its Highland source to its ship-laden estuary, it is no less adaptable to other parallel rivers and for their comparison. It not only serves conveniently for the British Isles, but equally for Norway and Sweden, for Germany and Holland, for the slopes of Alps or Apennines, for the United States or Brazil,

and is at once adaptable to the short steep slopes of Palestine, or to the vast range of Bengal or the basin of the Ganges. Since it is of such reliefs that all our world is built, these graphic valley sections afford us a convenient scheme of enquiry and comparison; yet as our surveys develop, their local characters are also expressed, and on as large and full a scale as space and circumstances allow. Hence, for instance, the large friezes of the Cities and Town Planning Exhibition, which have been suggestive towards local museums, with their regional and city surveys. Upon this diagram then is summarised in outline the previous section (XII); but for its full elucidation a volume would be needed, on the fundamental occupations.

XVI

But, it may be said, our economic life has long ago changed its centre of gravity, from 'country' to town. True; so now to this valley section, we add a corresponding general diagram for the City Section. In default of the corresponding diagram drawn for this, the reader must be asked to imagine it: as a long street of shops, dwellings, and public buildings, such as he knows in any city; but now here conveniently arranged for diagrammatic purposes, parallel to the valley section and linked up to this by its roads, etc. In this way we begin with the shops (and dwellings above) for the occupations which have their origin in mining, like the jeweller, the smith and ironmonger, the brass and copper workers. Next the woodman's businesses, of fuel trade, carpentry, furniture-making, etc. Then the shops of game and of furs, of hunter origin; and so also beside these the military post or barrack. The wool and carpet industries and trades, and the sheep-market next them represent the great

general pastoral origins, as also, in larger cities great general stores; for these are derived from the transports of the caravan trader, and bear witness even to this day to his wide connections and organising powers. The railway station too, as depot to our modern caravaniers, is shown beside this. The religious edifices and the school, alike so also deeply pastoral in origin, are also in this vicinity. For the poorer peasants, who have come to town seeking labor, there is the porters' corner, the hiring market, and in developed towns, the Labor Exchange. Yet beside this also the Bank, and even the Insurance Company, for these have been largely initiated and headed by men of the poorer peasant formations, whose traditions of life have prepared them in frugality and thrift, towards shrewd investment and foresight. The richer peasant from the poorer lands has the largest share of the street; for here are not only many of the best shops, and even houses, of the prosperous grain dealer and baker, of the milkman and butcher, also the big brewery and the distillery the modest inn and the fine hotel, the public-house, and also the club which is the gentlemanly equivalent of the public-house as regards its refreshments and card games, etc., and the town-hall, as the development of its discussions. The doctor and rentier have here also their homes with gardens and stables. The greengrocer and florist represent the peasant as gardener. Finally, not only does the fishmonger represent the fisher. The mercantile and shipping offices and stores beside the port, and even the grocer's shop further back with its far-brought luxuries, express him as merchant-venturer: so too does the "china" shop, the wine-shop, the silk mercer's too. The naval depot has also a similar origin, developed through past defensive and offensive war.

Our City-Section thus clearly represents the valley section of its region; and it centralizes it, and this historically and actually more than ever. In the simpler towns, and even at times in the great, the periodic markets exhibit their intermediate stages of evolution. Even the magnificent International Exhibitions of Paris up to 1900 were but its recurrent culminations, of what from old times has been the central fair of Western Europe.

Here then is a beginning towards the sociological survey and comparison of cities. We may note those which respectively excel in this or that line, as Birmingham with its metal and Bradford with its wool, London with its docks and world-wide merchandise and thus our cities exhibition grows.

Besides elaborations and subdivisions without end, combinations of all these fundamental occupations are also to be noted. Thus the coal merchant is the old woodman and "char-coal" burner, who has learned to mine for subterranean fuel, and so on for many occupations more.

In peace-time, all these occupations, simple, specialized and compounded, more or less pursue their own course; and of old as "gilds;" and since the breakdown of these, in individualistic fashion, and with individual competition, or renewing inter-relations, as now-a-days are appearing. But in war-time, the hunter increasingly mobilises all the occupations under his command, as also their youth into his ranks; while the sea-folk doughtily aid him.

XVII

In such simple ways we are beginning to standardize our study of cities throughout their history, and up to their present, and with economic realism accordingly. And the more clearly we visualize such

developments, and generalize and interpret them, the more interesting do we find more advanced (though less systematic) treatises, *e.g.*, Prof. Marshall's recent *Industry and Trade*; and the more too do we realize the significance and value of its sociological advance upon the relatively traditional and conventional manual of economics of his earlier years.

We are not forgetting that there have been corresponding advances upon the devices of money-notations, as from notches or tally-sticks to modern book-keeping, through coins to cheques and clearing-house; nor from personal ownership to shares and stock-exchange. But on all these the economist has long specialised indeed too preponderatingly. The sociologist, and now also the public, while willing to learn what the economist's enquiries into mercantile oscillations and financial devices can tell them, are now increasingly recalling him to the social life itself, within which all these processes have after all but a relatively limited field, important though it be. This field also we may symbolise upon our city section, by drawing a datum line through its shop-tills, bank-office, stock-exchange, and of course the money boxes of its dwellings; and then summarising, as oscillations upon this line what the monetary and financial economist more copiously describes. There is moreover on our general diagram the square of Work, in which all productive exchange operations may better be considered: for the present outlines of valley and city section, for study of country and town, are for the square of place-Work.

Yet along with this we have all along been noting the essentials of folk-Work (occupation) as well; and thus in outline also of work-Folk. Here it must suffice to note that occupations, even in modern conditions, have tendencies to become hereditary; so that it is no marvel that in the steady-going societies

of earlier ages these should have become so largely fixed into "Castes," (although other factors of origin have also to be considered, *e.g.*, of place-Folk—the incomers and the natives, in their varied relations), and of course also the Folk generally in their racial characters and typical developments.

It is important here to note how large a share of our squares thus call for the attention of the economist, and help more clearly to present the fields of his studies, especially the four squares vertically and horizontally beside the central square of Work.

		PLACE-WORK	
WORK-PLACE		WORK	WORK-FOLK
		FOLK-WORK	

But this whole scheme makes it apparent that we cannot end with these five in all. We must complete the nine squares as in Fig.3, p. 42, of this volume. So far then, any adequate economic study, of any place and people, covers the same field as the sociological so far. The geographer but elaborates from his initial square, of Place, yet has especially also two more squares in each direction, into which the idea of place enters. So the anthropologist for his 2+2 complementary squares, to that of Folk. Thus the three studies with which we start—geography, economics, anthropology—enrich and complete one another into a sociological unity.

The rational and simple analysis of each of these main squares—of cosmography, technography, and politography, as we may ambitiously begin to call them—and their correlation with the associated (subjective) squares of sense, experience and feeling, is thus satisfactory, whether followed up with actual surveys, or compared in their abstract outline-analysis. But if so, are we not re-discovering for ourselves—as men have so often already in very various ways discovered—the essential and profound unity of the abstract with the concrete, and of the concrete with the abstract. For these are not the antitheses we too often think them: as M. Taine was wont to say, “the abstract is but the abstract of the concrete, and the concrete is but the concrete of the abstract.” Have we not here been repeating in the sociological field what the economists have so long been doing in their own ways—some intensively concrete, seeming even buried in the statistics, yet often eliciting unexpected laws, and others deductive, with a boldness exceeding that of any other concrete science, yet sometimes at least verified by facts?

XVIII

But the reader may say, even granting the general earlier interest of such a correlation as this, of geography, economy and anthropology, and of all with psychology, can it be worked out into the detail necessary for further research? For if not, we must go on again as we were doing. Granted. First take an example of how each and all of the large fields of thought indicated by these squares (Fig. 1, p. 31, and Fig. 2, p. 40) may be surveyed more fully, and of course each in its own appropriate way.

Begin with Place. This evidently may range, in concrete aspect, from atom or electron to the world, to

the whole universe; and in abstract aspect, from point to infinity. Again we cannot but imagine all these as in rest or in motion (or, what comes to much the same aspect, ourselves in our viewpoint to be fixed or free).

Next consider how to map out the large square of Folk. Folk obviously range from babehood to normal average, and from this level to the fullest maturity and perfection; and all this alike for the two sexes, female and male; the first the relatively passive sex, the other the relatively active. Neither geographer nor anthropologist will quarrel with these simple outlines; but what now of the economist's field—of Work? That obviously ranges from the simplest executive labor to the most comprehensively directive; and it develops in this way, as with Robinson Crusoe while alone, but next differentiates and divides, as when Robinson Crusoe gets Friday to do the digging. But energies are not only kinetic; but may be potential also, as when these co-ordinated exertions resulted in a full corn-store. But here we have the three sub-squares of simple Labor, Direction, and Capital, which economists have progressively explored. Capital plainly is potential direction, but what now of the fourth quarter-square, of potential executive, *i.e.*, of labor unemployed, yet not conserved, but dissipating unless employed? Thus in these first three quarters of this square of work we have the bulk of the traditional economics, the classical orthodoxy of Smith and his successors; while in the correspondingly detailed investigation of the fourth quarter—that of the unemployed and their relation to the others—there lies plainly enough the economic field of Marx, and his now worldwide schools; in fact, the very essence of the socialist protest.

Here then our diagram, so far from being blank of detail, tends to carry us straight into concrete

controversies; and even with suggestions towards clearer and briefer statements than heretofore: why not some day perhaps towards outlining practical solutions also? Compare now the three main squares, of Place, Folk, and Work. Though each was subdivided according to its own nature, and in the way of the geographer, anthropologist and economist respectively, are they not strangely parallel? Thus, is it not men generally who labor and direct, and women who economise and spare and hoard? Recall how the Bank of England is in popular phrase "the old lady of Threadneedle Street", and the Bank of France the "long stocking." So in the field of Place, the female and thrifty sex are also the relatively static, home-keeping, sedentary. It is not women who make voyages or lead migrations.

But these, it may be said, are after all simple relations: can they be extended into the corresponding psychological fields? For the correspondence of the squares of "Place" and "Sense" this is obvious; as with the static map, yet moving traveller, to the chart of the "fixed" stars, yet their parallaxes and streamings.

For the square of "Work," and for its "Experience" too, the kindred fourfold division soon appears, of course adaptable to each occupation, with its characteristic technology, simple for the laborers, more skilled for their directive chiefs, and shrewdly intellectual for capital with its potentialities. What now of the remaining fourth quarter, that corresponding to unemployed labor? Does not their experience range between the depressed and the exasperated, even the impassioned? If so, might it not have been well if economists had taken fuller note of this, before the contemporary situation?

Here it may be noted that in these subdivisions of these squares of economics and its experience, we find we have unexpectedly come upon the four categories which

Comte recognized and established for every form of society, those of "people" (labor) "chiefs" (direction of labor), "intellectuals" (here capitalists), "emotionals" (here the unemployed, now more or less in revolt.) This fourfold economic segmentation of working society observed by the economist, and the social divisions of the sociologist, thus turn out to be far more closely akin than either foresaw. Indeed, this parallelism was not at all foreseen, still less inserted, by the writer in the diagram, but appears simply "by inspection of the figure", as the geometers say.

XIX

Now take a further and (at least to the writer's mind) more striking instance of this unexpected suggestiveness of a simple notation. What idea does the square of Feeling yield, in relation to the preceding simple and inevitable fourfold arrangement of Folk into the two sexes, with their simple and their developed types?

First note that even already the conception of History has been at times suggesting itself—since place alters, work develops, and folk grow and change and die; yet these accumulate and transmit something at least of their social life as heritage to their successors. Here economist and sociologist are not at variance, save that the latter goes farther, and follows and corroborates Comte in seeing in this concept of "historic filiation" the characteristic differentiation of sociology from biology, with its organic heredity. For, however little "acquired characters" may be inherited in biological descent, there is no doubt that they are heritable, and largely inherited, in the succession of social generations. Hence at once the manifold Heritage of civilisation, its manifold Burdens also.

Thus both economist and sociologist cannot but agree that the scheme of Place, Work, Folk, gives us

but a section of the stream of life, at a given time; say a day's life and work. But those days accumulate into history, like successively deposited strata, or like successive news-sheets making us a year's history, and successive volumes piling up into that of a generation or a century.

With this agreement then, let us return to our related squares of Folk and Feeling. It will readily be agreed by economist and anthropologist alike that the feelings of every folk become fixed by habit, into established ways of feeling, and thus of ways of living in relation to each other. For expressing these we have no single familiar word in English; but in Latin it is expressed by *mores*, and in French by *moeurs*; and for each of these words it is significant to note that it is only by the context that we tell (but then at once), whether the writer is referring to what we in English usage distinguish, without generalising, as morals, manners, customs, and even laws. To supply this generalised term, hitherto lacking, Professor Sumner has introduced the term "Folk-ways," and American writers at least have accepted it; as we may now also conveniently do.

Four forms of Folk-ways then—morals, manners, customs, laws: here are vast regions of the universe of discourse, each with literature without end, which no man can fully range through. What light now can be given on all these by our simple analysis of the Folk, from babes to fullest adults of both sexes? Does not this simple biological outline seem a failure of the notation, and prove its hopeless inability to reach down into these far complexer fields of the moralist, the critic of society, the anthropologist, the lawyer?

Only at first sight. Who first taught us our essentials of Morals? Our mothers, of course. Yes; and these simply as women, normal women of the

whole people, apart from any differentiation of class. For the morals of any people are fundamentally what their women approve, and impress or inspire; and although thereafter, of course, their sons and lovers, grown to elders, or developed as idealists, may teach morals too; it is not hard to find the feminine influence.

Next, who taught us our Manners? Obviously first of all our mothers again. But this time not as simple women of the people, people too busy and too poor—in the prevalent economic dispensation at least—to pay much attention to manners. In so far as the women teach manners, is it not as themselves developed and refined?—in fact as ladies. And though thus conspicuously teaching manners to their lovers, it is in the main the standards of the mothers which determine the manners of a people. For in what time, country, or language, do we not find the distinction of “well-bred ” from “ill-bred.”

Now the Customs of our folk. These do we not essentially inherit from our fathers? For though no doubt largely from our elder brothers, our comrades, and contemporaries of all kinds, our remote ancestors too, what is all this but a transmission through male elders especially? And these are necessarily fundamental and common to the people, whose ways of working and living they essentially express.

But the Laws? These, in every social tradition, are in the first place customs developed, ratified, fixed, and maintained, by our elders and social chiefs. But laws are also, and increasingly, newly established, and thus of course by our men of authority, the modern “chiefs.” And so once more we find our diagrammatic method of correlation more potent than we could have expected: not only parallelising the biology of the Folk with the sociology of their folk-ways, but this with unexpected evolutionary simplicity as regards

their long-disputed origins. Here also we find once more an adumbration of the fourfold social analysis of Comte above mentioned:—

FOLK	(Elders)	
	FEMALES	MALES
	(People)	
<hr/>	<hr/>	
<i>Feeling</i>	<i>Morals</i>	<i>Customs</i>
(<i>Folk-ways</i>)	<i>Manners</i>	<i>Laws</i>

The above analysis of each of these main objective squares of Place, Work and Folk—cosmography, technography, and politography, as we may now more ambitiously begin to call them—and their correlation with the associated (subjective) squares of Sense, Experience, and Feeling, is thus justified, and its parts are correlated in detail; and this, whether compared in their abstract, or filled up with actual social surveys. If so, are we not here again re-discovering for ourselves the essential and profound unity of the abstract with the concrete, and of the concrete with the abstract?

That all our corresponding pairs, of objective and subjective squares, are thus related in fourfold detail, and these with each other, may now be worked out by the reader himself; and, if he cares to take the trouble, it will reward him. Graphic logic is more potent and fertile than is the logic of tradition.

XX

Why so little of all this is economic literature, which one would have expected to have been interested in such developments? Is not the reason because economics does not keep pace with other sciences? Stanley Jevons, a generation ago, strove manfully, but

without immediate success to introduce conceptions of physics—the doctrine of energy, the idea of energy values—into the minds of economists obsessed by exchange values alone, even to the denial and exclusion of all others. Similarly as regards biology: economics has been too simply satisfied with the vague abstraction of “progress” to give a hearing to any trained evolutionary minds, capable of leading economists into concrete investigations of origins, such as the evolution of occupations.

There is, however, a deeper reason still for this sterility; and this nothing short of the old one, of the love of money as a root of evil. The economist has too often refreshed this love; of course personally on its intellectual side, as a love of monetary knowledge, not as individual lust of gain; but thus all the more effectively. For the world of gain was what he assumed as his essential field of study; and thus with disasters to the world, wide, deep and increasingly manifest, yet insufficiently told. A few writers have indeed traced the intellectual pedigree of the economists. Thus the old Physiocrats were plainly agricultural in spirit, and physiological in science; thus their foremost teacher—De Quesnay of the *Tableau Economique*, known familiarly as “the king’s thinker”, was also the king’s physician, and wrote a *Traité de Physiologie*. Other Physiocrats, like Dupont de Nemours, were distinguished in natural science; and this tradition, it is worth recalling, was expressed in a high degree by Rousseau, who though now remembered only as an exponent of social and educational ideals, was in his day the foremost populariser of botany. This associated naturalistic and sociological tradition continued in the Bentham family; and thence reached John Stuart Mill, a keen field-botanist and classifier, who thus was largely self-educated as syste-

matic logician. But unfortunately both these arid fields are sterile accordingly, falling short of the fertile conceptions of life and its evolution.

The main pedigree of economics is thus not scientific. It is metaphysical; and thus, in origins not remote, it is theological and scholastic. Every historic student knows how largely economists have been Jews, or their Protestant and Puritan exponents, Scottish for instance so notably; and it needs only a little reflection to see how in course of an evolution of ideas, amid the fading twilight of the divine, yet before the rise of the sciences of energy, life, mind, and society in evolution, the concept of the Divine, and most of its attributes—unity and justice, power, creativeness and more—were transferred to money. Are we then suggesting that what most still call “the science” of Political Economy has been to no small extent the theology of the great god Mammon? Frankly, Yes; mammonology and mammonosophy, of which the economists have been the teachers and preachers, with mammonolatry for their world-wide congregations. The persuasiveness of the economic teaching of the nineteenth century has thus been far more dependent than its teachers have yet realized on its lapse from the concrete thinking of the Physiocrats, physical, physiological and agricultural as this was, into a toleration, if not approval equivalent to practical acceptance, of the popular idols of the market-place, in which the monetary tokens and the accountancy tallies became exalted into the very essentials of the social energy process. Such simple and ardent faith, untainted by personal desire, could not but attract to its mystic vision, that whole-minded and whole-hearted absorption which is the goal of every idealism; and is indeed of the very essence of religion, whether it be realised as this or no.

This mammonological economics survived the development of the doctrine of energy by anticipating and adapting some ideas of it, since allocating to capital the attribute of conservation of energy, and to labor that of its dissipation. As for the doctrine of life in evolution, it did even better; for Drawin, whom Prof. Simon Patten calls "the last great English economist", at once naively and forcibly projected the doctrine of mechanical progress, by cumulative (and co-adjusted) patenting, upon living beings, and thus overwhelmingly convinced his mechanical age of the origin of species, in this simple and mechanical manner. He no less projected too the competition doctrine of the economists, and their optimism of its results, into nature; and again convincingly; for since "Competition is the life of Trade", why not also the trade of Life? The modern English mind could not but accept this economic theory of evolution; while Darwin's doctrine of the geographical extension of the efficient species was, if possible, even more congenial to the mind of steadily prussianised Germany, out for conquests. After victories and conquests—Danish (1864), South German (1866), and Alsatian (1871), successively—the German Empire, next solidly preparing towards more, up to the recent war cry of 1914 of "world-mastery or downfall," could not but ardently maintain so cheerfully confirmatory a proposition as that territorial expansion is of the very essence of evolutionary progress.

British and German biologists and economists, their statesmen of Empires too, thus confirmed and educated one another; and this widely convincing form of proof, though long known to logicians as the argument in a circle, remained undetected, even by them, thanks to their customary academic poverty of concrete science, ever since they logically established the mortality of Socrates. True, French thought, from Lamarck

onwards, remained outside this Anglo-German progress; but this was simply explained by the long current doctrine of their decadence; and thus English thought, in so far as not pre-Germanic, (or proto-Germanic) as at Oxford, became as consistently sub-Germanic as possible, *e.g.*, at Cambridge and London.

But now suppose French thought, albeit so long and constantly ignored, or even for the most part lost sight of, is turning out to have been not in our rear, but too far in the van for us; and this in each generation, from Lamarck's, Comte's, Le Play's, Taine's, as now so admittedly Bergson's? Suppose in fact that the evolution of life, both organic and social, is being found to proceed in ways profoundly otherwise than on those too simply Anglo-Germanic lines, of variations essentially of mechanical improvement and competitive advantage towards expansion—since deeper factors are being disclosed, largely sexual and species-regarding, life-regarding; and no longer so predominantly individual, and self-regarding? Space does not allow the development of such conceptions here, but the reader interested can easily find outlines of them in English.¹ Enough here to point out that if and when such altered conceptions of life and its evolution can be justified, the current conceptions of economics need a correspondingly thorough reconsideration.

Must not this involve even the displacement of money from its foremost plane of interest, even more completely than money did mechanism?—In fact the replacement of the prevalent mammonosophy by what we should have to call biosophy? If so, in time the popular faith, in Money more abundant, will have to give place to the ideal at once more ancient and

¹ For example, articles "Biology" and "Evolution" in *Chambers Encyclopædia*; Geddes and Thomson, *Evolution*, and *Sex*, both in the Home University Series.

more recent, of "Life more abundantly", and even to that of Love as "Creation's final Law".

So much then at present for these contrasted philosophies of economics; though these plainly carry as different doctrines of sociology with them, and different types of policy as well—*e.g.*, Civic (regional) and humanistic, *versus* individualistic and Statist.

XXI

So far then our simple analysis of life. Life social (yet also biological, since in terms of functional interaction of environment and organism) as place interacting with folk. Place and folk, through work: but all these with the inner life of sense and feeling and accumulated experience (socially transmitted also—the great superiority of the human species). All this is the every day life—of acts and facts, in home and household, in village, in market and in town; and in the nature-school, and the home-school, of experience.

Acts and facts, home-village or town, and school: here then are the confines of our elemental and fundamental social life. But all life—child-life and adolescent life especially—is also full of dreams. Dreams by day as well as by night.

So here we might enter into that new psychology, which of late years has been in process of elaboration, by Freud and his school, with their new and potent "Psycho-analysis," which, with no less potency than the methods of the radiologists for physical sciences, is now beginning to transform, not only mental pathology, nor even pure psychology, but all the manifold humanistic studies by help of these—as from past mythologies up to recent ones. It is even beginning to reinterpret our current mythologies as well, thus piercing, with a new and penetrative criticism into all the rival political, and economic, systems

of our own day. But the present line of study and argument has been worked out while sharing the still common ignorance of this great new line of scientific progress; so it may still here be followed, the more since this is now seen as complementary, and in no wise antagonistic, nor antagonised. Hence we may proceed without further reference to this new school of psychology, though with all recommendation of it to the reader who may not have come in contact with it, or at least has not realised its fertility in the interpretation of social life in general, and thus its suggestiveness in economics.

XXII

"Dreams" however, for the simple,—(say rather specialised, since habit-fixed and custom-hardened) adults of town and school,—for the everyday workman, for the business man, in short "the practical man" and his chosen pedagogues accordingly—have another and contemptuous sense—applied freely to all unfamiliar manifestations of mental activity. To the practical man, it seems plain that the intense manifestations of the religious emotion, up to rituals, and deep down to the mystic experience—those too of the reasoning life, up to all the high and intricate sciences, and the great philosophies, or deep down into psychological intricacies and logical subtleties—and those of the imaginative life, up to high poetry and romance or deep into esthetic criticism and speculation—are but so many dreamlands, and dangerous to real useful everyday life accordingly; since they are obviously outside its everyday requirements and experience, and thus indispose these dreamers to its everyday economic work.

All so far no doubt truly. Still these dreams and dreamers are also in their way "natural history facts,"

since matters for observation and enquiry. Religion with all its mysticisms, doctrines and symbols cannot be ignored: still less in our day the sciences and the philosophies: while even the practical man often betrays a surprising response to imaginative appeals, sometimes even of past art, but at any rate to those of his own day.—whether that be of the political oratory of the past century, or of the theatres, music-halls and cinemas, of the novels and tales more attractive to the younger generation. So too the vague, yet impassioned social utopias are of past and present appeal to whole classes of practical men, at one time in the ranks of capital, in another in those of labor.

Moreover in the past, from which all these various dream-cultures come, and in various degree in the present also, there are unmistakeable elements of great effectiveness and working force. The old religions did largely spiritualise, and often moralise their people; the sciences intellectualise their students more than ever: and art, which has blossomed so often in the past, is now struggling, often through the strangest experimental efforts, to realise its fresh dreams in beauty anew. These are no mere dreamlands then, since of good, true and beautiful—surely the eternal verities, and these rising above and beyond the too simple world, of space and place, of energies at work, and of transient time, to which too unawakened “practical” critics confine themselves. In fact, beyond the simple world of everyday work and fact are appearing those of culture and civilisation.

Nor is the relation between these two apparently contrasted life-worlds, the outer and the inner, difficult to discover. The imaginative artist's dreaming is transmuting the impression of his senses, into his personal vision of the beautiful. The intellectual is dealing with his real and direct experiences of the

world, and extracting from these, with such insight and reason as life and thought have developed in him, their essential order and law, and towards science accordingly, no longer merely empiric. And even today the religious spirit is not merely fixed in past forms, but is thrilling anew towards ideals of the good which seem to it again becoming discernible: and it is thus extricating itself from too literal readings, and too long conventionalized formulations of them.

This last process is widely known as religious "conversion", "enlightenment", and so on. But the other processes are also kindred ones, and true conversions too. For science is an enlightenment; and the artist's, poet's, musician's arousal is so far his rebirth. In the great constructive ages, all three came together—the new emotional uplift, beyond the simple folk-feelings and clan-loyalty of home and village; the new intellectual movement, re-interpreting its experience on some fresh view of nature and of man; and with these the corresponding imaginative vision also. This threefold chord of the inward life was in each such time reunited: so that the religious emotion; the intellectual striving, and the creative vision came together in a new renascence; and this not only transformed the instruction of the schools of the past into a fresh re-education accordingly, but achieved much as well.

XXIII

So far, do all these seem but subjective changes, ineffective to alter the everyday life, of home and village and town, of place and work and folk? Not so. Each new idealism steeps into and stirs the people; they not only listen to the new teaching, but seek to follow it. Some great idealist and his disciples take the lead, and give the too simple or outworn social and institutional life of feeling around them,

their own emotional tone and note of idealism; and next they shape from them and for them some fresh form of social life. Hence Buddha and Asoka, and all they stand for; hence, Moses, hence Paul; hence too Mohammed and Omar. And hence too, all later reformers; for whatever their various sins, measures, and powers, all agree—in not merely giving a fresh emotional awakening, but also in finding for this some corresponding expression in social life, and thus projecting some new organisation of society—which we may now call their Etho-Polity—upon an astonished world. In this sense even the latest social re-groupings—however apparently and predominantly political or economic—are all fundamentally emotionalized, so that even capitalism, socialism, imperialism and bolshevism are so far all religious; and to this they owe their dynamic intensity. Thus it is that they appeal to multitudes of men, and mass them in new forms. But each ideal and etho-polity has its intellectual presentment too; and this not only energises the individual upon its lines, but also synergises the mass, so far as may be. And towards what end? That is given by the imagination of its leaders, shaping the new vision; and thus, and before long as years go, (and in the measure of completeness of the whole combination of the threefold chord of subjective life with the corresponding objective life) is the measure of resulting achievement—and of failure so far also. Emotion, idealism, imagination thus express themselves, in polity, synergy, and achievement: in short thus it is that dreams have ever taken shape in deeds.

So thus from the fundamentally objective life, of everyday acts and facts, in our town and school, we must pass over to the subjective life of dream and deed; and even see these as supremely dominating

the former because transforming it. From their hermitage in the wilderness, their cloistered groups within the town or school—"in the world, yet not of it"—these dreamers have created their new life of thought, and their new line of actions as well, in the direction they have imagined, and towards the aim which seems to them their end—the conquest of their environment, both social and natural, and its shaping towards what seems, and thus is for them, nearer the good, the true, the beautiful.

Thus from faiths come polities: from their fresh idea-groupings come fresh synergies; and from new imageries new forms of realization. Thus the new army, be it of temporal or spiritual power and purpose, is gathered and set in motion, is grouped and organised: and thus it marches on, to the conflicts, victories, conquests, achievements of its day.

Here then is at least one presentment of the social flux of History. Acts and facts, dreams and deeds, have succeeded each other, through innumerable transformations. Yet, despite all protean manifestations, these are on one ever-revolving "wheel of life." In and on this, "people, chiefs, intellectuals and emotionals" (say rather for these last "intuitionals and expressionals") have each their part and day.

Then why so protean? Because the Achievement so far transforms the Place; the Synergy so far re-directs the Work: the Polity so far reorganises the Folk. And so the imagination transforms the impressions of sense, the thought saturates the experience; and above all the emotional life, with its fresh social ideals, transforms the old folk-feelings and folk-ways: and these to altered morals and manners, customs and laws accordingly.

Thus at once history ever repeats itself, yet never repeats itself. Each of these would-be philosophies

of history and social life has but half the truth, witness conspicuously the economic interpretation of history on one side, and its spiritual interpretation on the other; here clearly reunited as interacting each with the other. Folk-history and hero-history thus each find their place, and each as necessary to the other. Ontogeny and phylogeny are complementary aspects of life, and progress.

Our final diagrammatic summary will thus be readily understood; especially in comparison and contrast with its predecessor (opposite page 26), yet as the further development of it. Its fourfold chord of social life is now more clearly outlined than in that preceding one, with which comparison is asked.

Yet this outline-presentment of social life—and thus in principle of its sociology, including its economics—would be but incomplete, and lacking in concreteness, could we not define it one stage further. For how are the highest achievements and humanity ever realised? How but in the City?

This must now of course be clearly understood, no longer simply as the big town of market, machinery and money, to which the name is but vulgarly applied: but as the City in deed, and thus in thought as well. Every city has arisen according to its dream and aspiration, its thought and vision. When these were predominantly spiritual, there arose the sacred cities; now Benares, now Sarnath, here Jerusalem, there Mecca, and each with its daughter-cities far or near. So for temporal polities, in their briefer day; of which the many Delhis bear witness, and countless historic and actual "capitals", both old and new, over the wide world. For intellectual achievement Athens is but one sublime instance, to which all university cities to this day look back with honor. And so within all true cities alike, we may decipher their

protean forms, interpret their varied faiths and rites, appreciate their high achievements: for all these are the characteristic, and so far artistically clear, expression of the ideals which inspired their life. This was their Temple, and their temple is This. Stonecircle and altar, stupa and sepulchre, acropolis and cathedral, each in its place and age had this meaning and significance, and still bears witness to it. And so for temporal polities: each has found its expression in the past. The latest social systems, now at strife with the old, are still seeking this.

How now to create true Cities, for our own time? How far may we revive the old cities? And how inspire the new?

XXIV

Here then our studies of sociology, and of its indispensable sub-science of economics, find alike their fullest synthesis and their highest purpose attainable on earth. And both as Civics. For this civic thought and purpose are needed. "Area, wealth and population" are but the three initial elements of the problem: its simple geographic, economic and demographic beginnings. Towards what idea, what ideal? Ethopolity Synergising Achievement, of and for each city and region, in constructive deed: that is the conception and aim. Undeniably transcending and excelling those of all our recent and passing school of social and economic thought; since now to renew all that was and is greatest in the past, upon our opening field of vision and design, towards effective accomplishment. Vision based on survey of things as they are, yet this clarified to interpretative science and impelled to creative purpose, that of shaping them more near the heart's desire, the soul's and nature's potentialities of life.

This of course is the old story for the dreamer: yet it is one ever needing recall to the "practical man," as the economist so often tries to be and remain. Hence Emerson:—

"And what though trade sow cities,
Like shells along the shore,
And map with towns the prairies broad,
With railways ironed o'er?
These are but sailing foam-bells,
Along thought's causal stream,
And take their shape, and sun-colour,
From him that sends the dream!

So much then for the present, by way of outline of the inter-relation of Sociology with Economics, not only in terms of science, through social observation and interpretation, but also in terms of practicable impulse and application, as Civics. All are needed in social life, and towards its furtherance.

Summary (with further Explanation)

The essential argument of the preceding paper, as here continued from Vol. III., pt. 1, July 1920) will be found summarised upon the accompanying large folding diagram (Diagram II, p. 304) which should be compared with Diagram I. (p. 26) of which the stages, marked I, II, III, (III. B) are further clarified, and developed as IV.¹

The unity running through the whole series of diagrams, and those printed in the text, will thus readily become apparent. For the initial and correlated unity of life—which is biologically described as Environment functioning (on) organism, and in social-logical terms as Place work(ing on) folk—is familiar to

¹ It will be noted that the form of presentment in IV differs slightly from that of I, II and III, the last of which is followed in the smaller and detailed diagrams in the text. In IV the concept of Place-work-folk (Region, Industry, Family, etc.) is merely printed in ascending order, instead of the descending order elsewhere used, as found on the whole most convenient and most graphic, since keeping the most essential factors centrally grouped.

all students as of Region, Industry, Family-types and Institutions; though these, in economic and even sociological literature, are hitherto less clearly correlated.

Below this initial triad is placed the corresponding psychologic chord, that of the mental life at its simplest, in Sense-Experience-Feeling. This (in IV) is traced into cultural developments, in empiric and descriptive sciences, the natural, the technographic, and the social, with their corresponding beginnings of nature-knowledge, economics, morals and law.

In the third quarter of the diagram is expressed the threefold transformation, conversion, or sublimation of simple (folk) feeling into wider and deeper Emotion, and with its simple and customary range of morals and custom-law deepening into Ideals. Similarly the transformation of (work) experience as Ideation (*e.g.*, of land measurement to geometry), and thus the rise of rational sciences, and, in time, the dawn of synthesis. Similarly too for the simple or profound rearrangement of sense-impressions into new imagery, (as of man and horse into centaur, woman and tigress into sphinx.) The inward social, ethical, religious and even mystic life, the intellectual activities, as of logic, of psychology, of all the developed sciences, and of philosophy itself, and also the life of imagination, the dreams of art and poesy, and the ordering effort of design and its application, are thus here in principle provided for; though of course the development and justification of this claim would lead us beyond the present paper, which is as far as possible confined by its economic title, and indeed but opens an orientation of economic activities within the general field of life. Here in short, from feeling, experience and sense, we enter the inward world of the good, the true, and the beautiful; and we are now further entitled to insist upon their fundamentally unitary character, so deeply

discerned by the best thinkers of the past. The modern separation of the religious and the intellectual cultures from each other, and the corresponding isolation of these from living art, and of the artist too much from them, is thus seen as but an interruption of the normal chord of the inward life, emotional, intellectual and imaginative. This disastrous condition of modern culture as a whole, (and of economic thought accordingly) is comparable to that artificial and static separation of anthropology, economics, and geography with which the present paper substantially opened (pp. 6-47). Furthermore, the correspondingly needed recovery of unity in thought may be planned in outline into its main fields, by whoever cares to apply in this third quarter of the diagram the simple graphic and logical method indicated on page 42.

Finally, in the fourth (righthand upper) quarter of Diagram II. (as in the last diagram of the text, page 301) is outlined the projection of this inward life into the outward activity. This now becomes - social, and in ways undreamed by the simple everyday world with which we started, that of Place-work-folk, with its Sense-experience-feeling. For now such Ideals as have been formed inspire and create a grouping essentially new, since no longer in simple terms of folk and their folk-ways, but profoundly transmuted from them; and we have thus a Polity; indeed an Etho-Polity, since its coherence is now derived no longer merely by kin or tradition, but essentially from community of ideals. Such synthesis of ideas as has been reached is similarly willed into collective action, such as the Polity can attempt; and thus, soon or in the long run, with more or less of such achievement as has been imaged, *i.e.*, as the synergising group is able to attain. Here in fact is place for all the great efforts of peace, or of war.

Turning now this whole diagrammatic analysis of the social life with its left side uppermost, its four quarters are seen to be broadly labelled. In somewhat fuller summary, these are

EVERYDAY "ACTS" (of home, village, and "Town") ↓	"DEEDS" <i>in the city (the city in deed)</i>
ORDINARY "FACTS" → acquired in the "School" of (normal) Life, (and often to be distinguished from Schools so-called)	↑ "THOUGHTS" ("or DREAMS") acquired in contemplation and meditation ("Cloister," etc.) in reflection and reasoning, in imagination, (and in all more or less intuitively).

Furthermore, it will be seen that these four divisions are substantially the four essential social types named by Comte,

"PEOPLE"	"EMOTIONALS"
"CHIEFS"	"INTELLECTUALS"

and constituting, for any given Society, its

"TEMPORAL POWER" (<i>People and Chiefs</i>)	"SPIRITUAL POWER," (<i>Intellectuals and Emotionals</i>)
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These terms have not been universally adopted, largely owing to the eclipse of the spiritual power since the Renaissance and Reformation, and also largely through the prominence of People and Chiefs, as "Labor" and "Capital" throughout the industrial

age, and with their still increasing antagonisms accordingly. Yet partly also because the terms are not only unfamiliar, but open to criticism, the two "Spiritual" ones most obviously. Hence various alternative terms: among which both adjective and nouns are sought for, *e.g.*

OPERATIVE		INITIATIVE
	and	
<i>Directive</i>		<i>Reflective</i>
	or	
OCCUPATIONALS		EXPRESSIONALS
	and	
<i>Empiricals</i>		<i>Intuitionals</i>
Or more concretely,		
LABORERS		STATESMEN
	and	
EMPLOYERS		THINKERS
	or	
WORKERS		LEADERS
	and	
EMPLOYERS		ENQUIRERS
	or	
WORKERS		LEADERS
	and	
ORGANISERS		ORIGINATORS

Thus no terms have as yet been settled, nor indeed can be, while our social life remains in fermentation. For us modern warfare affords a familiar illustration, with its.

SOLDIERS		COMMANDERS
	and	
MINOR OFFICERS		STAFF

Hence the need of historic survey and the help it gives; thus every student of medieval Europe knows the people and their feudal chiefs as the "Temporal"

types; and the "Spiritual power" as essentially composed of regular and secular clergy (monastic and priestly); and all these appropriately located in village and castle, in Abbey and Cathedral. (He even finds complex combinations of these, *e.g.*, the chivalrous-monastic orders, like Templars and Hospitallers; but this would lead us too far for present purposes). A fuller outlining has been attempted elsewhere,¹ and in some detail, for the main phases of European society, past and present: enough however for most general statement, if we reduce People, Chiefs, Intellectuals and Expressionals to their initial letters, and then print these in different types and founts, indeed from earliest writing to early later and modern printing, appropriate to each age and phase of the social life we are analysing.

Most simply of all, he may learn from old Indian life. Are not the four initial castes of Manu the

PEASANTS

KSHATTRYA

and

TRADERS

BRAHMINS

That we may trace the like in all civilisations increasingly appears as we study them.

Of course after all the preceding schematic exposition, the economist may fairly say it has not got very far towards the specific problems which at present mainly interest him. True; but the problem has simply been to outline a general conception of social life, and thus with clear recognition of economic activities, and space for their interpretation within the general field of sociology; hence in correlation with biology and anthropology, with archæology and history, with religion and ethics, with psychology,

¹ V. Branford and P. Geddes. *The Coming Polity*, 2nd Edition, "Making of the Future Series," Williams and Norgate.

esthetics, and more; and all in relation to practical life, from simplest to highest.

For if this general method be found reasonable, and its mode of notation workable, varied applications will readily follow; and this not only in economics, but, *e.g.*, in education or in art, in civics, if not even in politics.

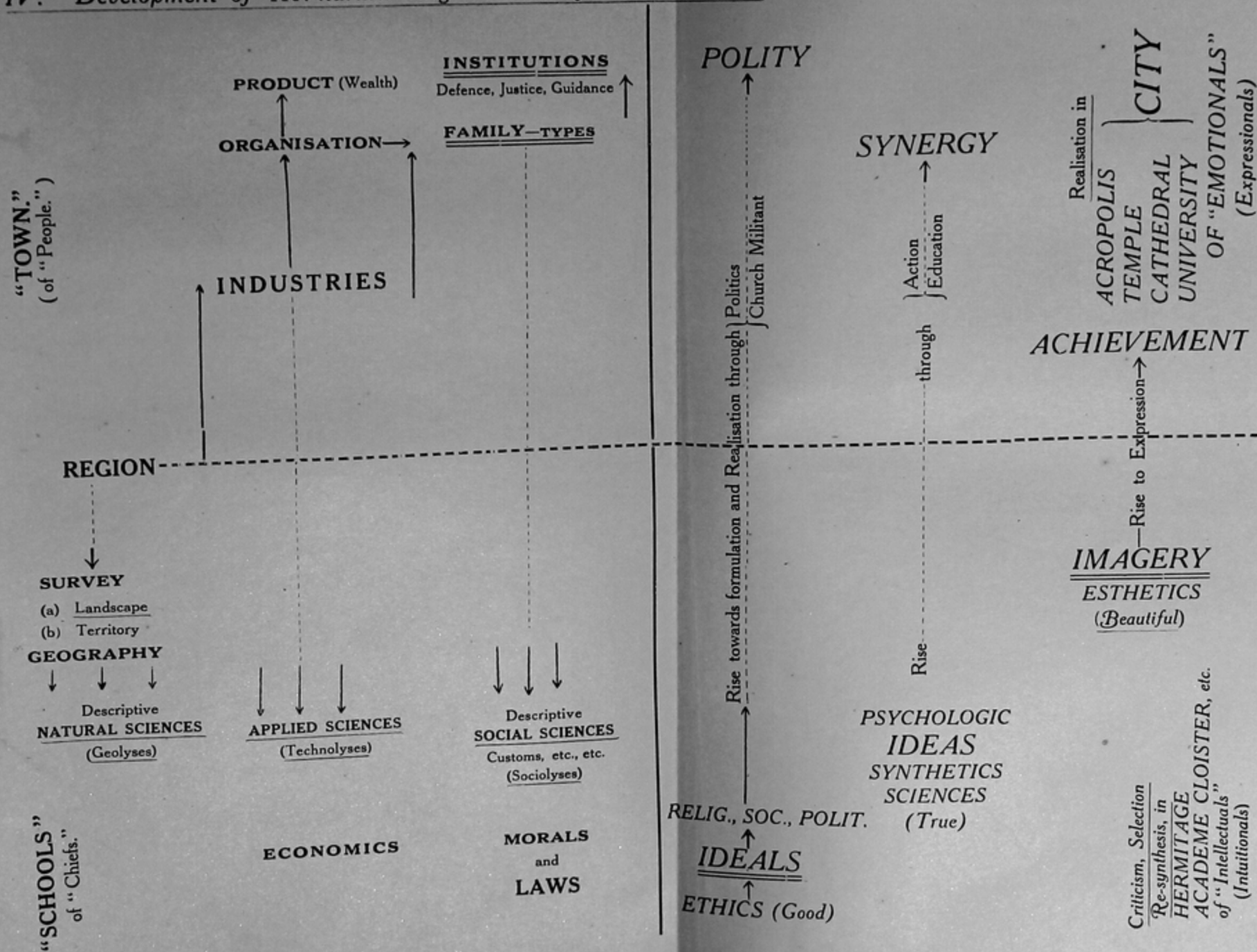
The general scheme will however be clear, as presenting the whole activities of life, "objective" and "subjective" together, in fourfold figure:



In psychological terms, life is thus here on one side viewed, with the "mechanistic" School, as *psycho-sis*, yet on the other side, with the "idealistic" school, as *psycho-biosis*. Instead of mere parallelism we have come to a presentment in terms of interaction. And though our diagram is evidently but sectional, of life activities at given time, further interaction continues; deeds so far modifying ordinary acts, and so on. Our sectional diagram, at given time, thus becomes historical, as its successive presentments are superposed, like daily news-sheets making up a year's volume; and these accumulating for generations and centuries. Or if we present this succession as in movement along a single page, or rather scroll, the historic succession also appears, and as a "fret"-pattern.

Yet all this too is too simple for our purposes, every specialist concerned may fairly say. Granted at once: the present object has been simply to map out what main fields of study arise from the initial conception of life, (first organic, then social) with which the evolutionist may begin, indeed must begin. For more adequate expression of the great "game of

IV. Development of III. harmonising essentials of I. and II. also.



life" the preceding is but the out lining of the chess board. How these squares may be subdivided, has been indicated, in Sections XVIII and XIX: and how they must next be increased, as notably for the notation of evils—*e.g.*

POVERTY	and	CRIME
IGNORANCE		VICE

may be puzzled out by the reader who will give it some time and trouble, as he would have to do with the card games of "Patience".

This notation, now for the first time published in outline after a lifetime not a little devoted to its development and use, has also been for a good many years found workable by others, and helpful and suggestive accordingly. So, like a chess player interested in the innumerable problems his game suggests and affords, the writer will be glad to hear from any who care to give it a serious trial; and will reply if desired, as far as time and conditions may allow.

THE ART OF ECONOMIC DEVELOPMENT

(CONTINUED)

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VII.—SOCIAL, POLITICAL AND LEGAL PRINCIPLES

1. *Security and Justice.*—The most elementary functions of Government are the protection of the people from external aggression, the maintenance of internal order and respect for property, and the administration of justice. The general term "security" relates both to persons and property, and includes the first two functions above mentioned. It is not irrelevant, as might be thought, to notice these primary functions of Government when writing on economic development. Security and justice are the very foundations of good Government and a contented and progressive state. Security of life and property is essential for the development of economic activities; and more especially if the full exertion of labor, and habits of saving and of investment of capital in reproductive undertakings, are to be encouraged. Throughout large areas of Europe, the insecurity of life and property remaining as a legacy from the Great War, is seriously delaying the economic reconstruction.

In India it is of the first importance to remember that the effectiveness of the Government in maintaining security and administering justice is a primary condition of the success of all measures of economic development. If those elementary conditions of good government are absent, no amount of expenditure of effort and money on the improvement of agriculture and encouragement of industry will have much effect. Agrarian disturbances such as have occurred in the United Provinces in recent years retard the progress of agriculture, and deter zemindars, and capitalists of neighboring cities, from investing money in improving land. The tenants, knowing that a state of tension exists, may very likely feel equally indisposed to undertake any outlays of capital and labor which can only bear fruit in later years, even though their tenure be legally more or less secure for a long period.

In some of the Indian States efforts have been made to colonize large areas of fertile land which were lying waste; but with no great success, many of the immigrants having abandoned the new settlements and returned to their old homes in a few months or years. Enquiring into such cases, I have found the usual explanation to be the insecurity of property and the heavy exactions of landlords and petty State officials. Very often new settlers who take up the cultivation of waste lands find that they are interfering with vague grazing rights of neighboring villages, which may be several miles away; or the presence of the new comers is objected to for other reasons. The existing inhabitants harass the new comers by stealing their live stock and damaging their crops. If the State police is not very effectively organized, such practices cannot be repressed, and the development of the waste lands is retarded or altogether prevented. Cases have been

reported where subordinate State officials blackmailed the settlers and refused protection unless heavily paid.

Economic development involves the destruction of long-existing customs. It is a means of progress; and progress involves the change of the old order, and interference with vested interests and the accustomed habits of a great majority of the people, who are slow to understand or believe that they themselves will have any share of the general benefit to accrue in future years. Thus economic development raises opposition; and it cannot be successfully undertaken unless the Government makes provision to maintain order and the security of property at the time when the old-standing customs of life are interfered with.

Attention needs to be directed to four principal sources of insecurity property, any one of which, if unchecked, is capable of defeating all measures designed for economic progress. There is first the fear of external aggression, such as the possibility of war, or raids by frontier tribes. Secondly, there is the fear of robbery and arson by maliciously disposed persons of the neighborhood. Thirdly, there is the fear of illegal and excessive exactions by petty State officials, which constitute a very serious obstacle to economic progress in many parts of rural India. Fourthly, there are the unbridled exactions of landlords and their agents, which naturally become the more serious, the more congested the population and the greater the competition for land. For all these evils there is no sovereign remedy. Legislation against them, though essential, can do nothing by itself. An upright and learned judiciary must be combined with an honest, zealous, and efficiently trained body of executive officers. In the administrative problem thus presented the economic factor is more important than is generally supposed. A loyal and efficient body of police and

subordinate Government servants cannot be maintained unless the men be adequately paid according to their status and the prevailing cost of living. However, a country in which communications and agriculture are in a backward state is too poor to provide the public funds necessary to pay adequate salaries to a sufficient number of men. Yet the development of agriculture cannot be secured until that honest body of well-paid officials is created. Hence we find a vicious circle, which is in fact preventing progress in many parts of India.

One way out of the vicious circle is undoubtedly first of all to improve the communications by the building of railways and the provision of a net-work of good roads. This will create a taxable surplus of social income and enable both education and the improvement of security to be financed. At the same time the provision of more roads and railways will facilitate rapid access to all parts of a district, which would directly assist the maintenance of order and the detection of crime. The facilities of travelling afforded to the villagers would also tend to raise their standard of living and their ambition to improve their agriculture. The problem of financing the construction of roads in a backward district is one which can be and must be successfully solved. I shall deal with such practical problems of finance further on.

Whilst the provision of honest judicial and executive services will go far to remove the second and third of the above mentioned causes, the fourth cause, namely, exactions by landlords and their agents, must be attacked by a different method. I would suggest that land agents should be required to hold licences from Government; and that those proved guilty of malpractices should have their licences suspended or cancelled. At the same time training schools may be

established for land agents, and the passing of a simple examination, of a rather higher standard than that required for patwaris, should be insisted on.

Side by side with the remedial measures of Government it is necessary for the people to learn to protect themselves. Two movements will help in this direction: the diffusion of primary education and the spread of co-operation. Every co-operative credit society, and co-operative purchase and sales society, is a potential source of strength to the cultivators in getting their grievances rectified. There is a growing feeling in favor of unity of action amongst the peasants of Northern India; and this movement needs to be very carefully directed into constructive channels by attention to real grievances thus brought to light, and by an educational campaign. Otherwise such a movement for unity of action may well develop destructive tendencies, and thus prove a hindrance to security and progress. This would be the more deplorable, because, if rightly guided, the movement might be a powerful instrument in promoting the welfare of the cultivating classes.

2. *Human Evolution: its natural tendencies and control.*—There is some danger of regarding economic development purely from the points of view of engineering and finance, with perhaps ideas of improved agriculture and the development of industries added thereto. It is almost forgotten that the object of development is the welfare of a certain race or community of human beings; or if the individuals are thought of it is in the abstract. An insufficient regard is had to the peculiarities of different races and the more or less heterogeneous character of many peoples. Some races are intelligent, alert, and industrious, although they have not had the benefit of modern inventions and accumulation of capital. The Chinese are a good example.

Others are low in intelligence, or naturally backward; or on the other hand, though gifted with plenty of intelligence, they lack stamina and capacity for sustained labor.

The benefit of works of economic development and their financial result will depend very largely upon the character of the people inhabiting the region to be developed; or upon the character of the immigrants, if the territory is to be colonized. It is necessary, therefore, to make a careful study of the human material which is to take its part in the development schemes.

It is impossible here to enter into any wide discussion of ethnological differences and their probable causes. In fact in the systematic study of racial variations, especially as regards temperament and psychological differences generally, very little has yet been attempted, and in India no systematic results are recorded. There are, however, certain laws of the evolution of man which are of general application; and many of these are of an economic character.

The most potent factor in the survival of man is his ability to obtain food; and all economic relationships and economic evolution centre in the first instance round this primary necessity. Hence there arises gradually an occupational selection which may result in marked divergences of temperament, and probably also of intellect and physique, whenever the character of the occupation leads to the segregation of the workers in a given locality.

In the most primitive settled communities agriculture is the dominant occupation. Nearly everybody is an agriculturist; and there are but one or two specialist artisans in each village. Every group of villages is practically self-sufficing. With the growth of means of transport, and the development of a class of traders, specialization of labor becomes possible, and gradually

becomes a fact. Thus people can maintain themselves, although no longer cultivators. The woodman and the hunter go to the jungles and the hills; and the products of the forest are brought to market. The miner, supported by an accumulation of capital in goods, of his own or some one else's, goes to the wild parts of the country and devotes himself wholly to the [finding and winning of minerals; and others take up the smelting of ores. The shepherd tends his sheep on the hills or grassy plains whilst the cowherd looks after huge herds of cattle.

In every primary occupation there are different temperamental qualities which lead to success. The miner needs courage and perseverance; the huntsman extraordinary powers of endurance and a joy in killing. The shepherd on the other hand must have a love of animals and must delight in tending them and keeping them in life and health—otherwise he is a failure at his profession. The very fact that men succeed best at those occupations which give them pleasure leads to the natural selection of such persons until these qualities become embedded in certain families and more or less in certain races.

The development of communications, especially railways, in any territory enables the growth of commerce, and later of manufacturing industries. The factors leading to the localization of industries are very diverse, and do not concern us now. The fact of immediate importance is that a localized industry, whether it be coal-mining, cotton spinning, or jute manufacture, introduces a new factor of occupational selection. Those unsuited to the particular conditions of life and work imposed by the character of the industry are eliminated either by destitution and disease, and the inability to rear families, or by their removal to another locality where employment is obtainable.

After a hundred years or more the population comes to have a high percentage of persons whose inherited qualities are adapted to the requirements of the predominant local industry. The best example is to be found in the Lancashire cotton industry, and the coalfields of Scotland, the North of England, and South Wales.

There is a constant interaction between a population and its environment. It is usually said that the greater the development of communications, and the progress of invention and of material civilization generally, the more is man able to alter his environment, and the less dependent does he become on favorable natural conditions. It is certainly true that the incidence upon the individual of adverse conditions like extreme cold, or the prevalence of malaria, can be greatly modified. In many ways, however, man becomes more dependent on his environment with the advance of civilization. The specialization of occupations requires that large populations live where nature provides the natural resources—whether they be mineral, timber or fish. The sources of hydro-electric power, the convenience of marketing centres, the junctions of great railways or rivers are all factors which determine the growth of towns, and the emergence therein of populations with more or less specialized characteristics.

In every country the progress of material civilization, and particularly the application of labor-saving appliances in agriculture, is tending constantly to reduce the ratio of the rural to the urban populations. The cases of England and Japan are exceptional, depending as they do so largely on over-seas trade. The growth of city populations, in Germany and the United States, and still more strikingly in Australia, afford a verification of this law of economic development, which also can be established *a priori*.

3. *Variety of Occupation*.—Recognition of the fact that different occupations require different qualities of temperament, character and mental capacity leads very easily to the conclusion that it is to the greatest advantage for any country to develop a variety of occupations. In every family stock variations in the qualities of the mind naturally occur. Some of the young men have naturally the patience, persistence, thrift and foresight which make the successful agriculturist: others are emotional and imaginative and may become artists and poets, whilst others have mechanical and constructive gifts, and others again are organizers or leaders of men. Stocks exist in which persons with one or more of these attributes predominate; and occupational selection leads to local increase of the percentage of families in which a particular character is predominant. Yet all of the qualities seem to occur sporadically in all families; and where the occupations are few a goodly percentage of young men find no scope for the exercise of their full faculties. They are obliged to make a living in an uncongenial occupation. They are listless workers, who fail fully to enjoy life. Society suffers loss in the misapplied work and undeveloped capacity of such persons.

From the national point of view also variety of industries and hence also variety of occupations, is essential, if the country is to take its place in the hierarchy of nations. No people can yet afford to ignore the possibilities of war; and national defence requires the employment of every resource known to modern industry and science. A country which is lop-sided in its development must necessarily be weak in war and therefore in diplomacy.¹

The need of variety of occupation is a strong

¹ See H. J. Mackinder's *Democratic Ideals and Realities* for an exposition of these and cognate ideas, especially pp. 180-90.

argument in favor of the policy of scientific protection—by which I mean the protection of infant industries, and a certain amount of general protection proportioned to the ascertained needs of the country whether for revenue, defence or commerce. This is not the place to discuss a policy of protection: I wish rather to point out that variety of occupation should be a principle to be kept constantly in view by all those responsible for directing and planning the economic development of any territory. Development is usually planned with a view only to the immediate and direct money income, whereas an enlightened policy would take account of the social and even the psychic income which will accrue to the population; and which always, in the course of ten or twenty years, will increase their taxable capacity, and thus in the end justify the policy, even from the point of view of the financier.

Some examples will make my meaning clearer. It might be thought that in India, with its predominantly rural population, the public works and all measures of economic development should be directed to the improvement of agriculture. This would be contrary to the principle of variety of occupation. The results would be disappointing—at any rate less would be achieved in the long run than by directing the available resources partly also to the development of suitable industries.

The principle of variety of occupation is of especial importance also in colonisation schemes. One of the chief criticisms which has to be directed against the planning and development of the great Punjab canal colonies is the want of appreciation of this principle. They were conceived as vast colonies of agriculturists carrying on a more or less primitive agriculture, with small towns here and there. Insufficient provision was made for communications, especially for roads. Even now, after

forty years, the colonies suffer from the insufficiency of local roads, and the almost total absence of metalled roads, even the few main roads being largely unmetalled. The railway facilities, though better than the roads, leave much to be desired; and little has been done by the State Railway Administration to facilitate the growth of industries. Some of the canal irrigated tracts of the United Provinces have been similarly neglected as regards the provision of communications and the amenities of civilization, with the result that agriculture develops to a certain extent and the population increases, but remains at a low standard of living.

In the considerations above stated there lies ample justification for Government undertaking special measures for the promotion of commerce and industry; but it is obvious that the necessary financial outlay can be applied with the most fruitful results in those regions where expenditure is also being made in the promotion of agriculture. The question thus introduced of the locality of expenditure leads on to the further question of the general planning of economic development in relation to the physical features of the country over a wide area, which will be examined in the next section.

4. *Regional Planning.*—The idea of regional planning is a modern development from town-planning. The town-planning movement itself is only about thirty years old; but it has enormously developed in that time. The idea of planning out a completely new town on scientific and artistic lines led to the systematic planning in advance of the extensions of the existing great cities. The problems thus raised turned the attention of the town-planners to the rural districts and their communications. The growth of existing towns and the birth of new towns was seen to be dependent

upon the lines of roads and railways; and the location of these according to the character of the rural district traversed and the situation of existing towns and potential sources, of natural wealth, such as coal-fields, was 'seen to be of the highest importance.

The first practical proposals for regional planning appear to have been made in England about six years ago, and during this short period the idea has become widely accepted and is being acted on in England and America. In one of the early articles of this series¹ the idea of geographical units was introduced. As a general rule the term "geographical unit" is perhaps applied to larger areas than would be designated "regions"; and the subdivisions of the main geographical units are the areas properly termed "regions." However, there is no settled practice in this matter; and the terms are to a great extent interchangeable. The term "geographical unit" refers, however, to the physical features only, whereas the idea of the region is somewhat more extensive, including characteristics due to the growth of particular industries which may depend upon climate, or the existence of coal or hydro-electric power. A geographical unit may in fact fall into two or more regions according to the nature of the natural economic resources and distribution of population.

A good definition of a region is the following¹:—

"A region is primarily a tract of country which forms a natural unit determined by physical features. Such features may be a chain of mountains, the valley of a river, or the presence of coal or other minerals beneath the surface. On the other hand, it may be some peculiar quality in the climate which adapts it to a particular industry. . . . If we are right in this, regions already exist wherever civilization has adapted itself to physical features; they are not waiting to be invented, but, perhaps, are waiting to be properly recognized and organized."

Regional planning has been practically applied in the case of the South Wales coal-field, and is under

¹ *Garden Cities and Town Planning Magazine*. Vol. XII, No. 5, (May, 1922), p.75.

consideration for the London region and for New York. In each of these cases the area covers from two thousand to over five thousand square miles. The initiative is sometimes taken by the State or the Central Government which calls a conference of the municipal and other local authorities affected. A Regional Planning Committee is thus formed, which proceeds to co-opt representatives of the railway systems, canal or waterway authorities, port trusts and representatives of Chambers of Commerce. The Committee calls in the aid of expert town-planners to consider the problems relating to existing cities and their expansion. Representatives of the Country Councils (or District Boards) and highways committees consider the alignment of new trunk roads, and their engineers confer with railway engineers as to the location of new railways and the feeder roads needed for approach to both existing and new railway stations.

Regional planning goes further, however, than merely planning the lines of new roads and railways. An important part of its task is to provide beforehand for the growth of new towns in appropriate locations, as where a new coal-field is likely to be further developed in the near future. The lines of the railways which will be needed have to be determined, and the railway junctions; the sites of new towns must be selected, their roads planned out, and the proprietary rights over the land be acquired in advance by some public authority. This laying out of new towns and the public acquisition of land renders the adoption of regional planning eventually highly remunerative in the sphere of public finance; for the growth of land values will give relief to taxation or local rates according as the ownership of the land be national or municipal.

The successful establishment of the garden city at Letchworth thirty miles north of London, and the

recent establishment of a second garden city somewhat nearer at Welwyn, has given an impetus to the idea of planning what are called "satellite towns" in the neighborhood of existing great cities. More than one writer has proposed the laying out of sites for about 18 or 20 new towns within a radius of thirty miles from the centre of London, each new town to be planned to accommodate a population of from 30,000 to 50,000. At the same time many new main roads would be required. New radial main roads radiating from London are in actual course of construction; and in the United States a great era of road building began about 1913 and has been resumed with ever-growing enthusiasm and immense capital outlays since the close of the great war. This activity in road building, coupled with the discovery that many American railways have been located in a manner most wasteful from the point of view of public service, has given an impetus to the movement for regional planning.

The idea is almost entirely new to India, but the conditions are such that it ought to receive close attention. When the immediate necessities of the existing lines of railway have been met, we shall enter upon a period of the construction of new lines. It is to be hoped also that the supreme importance of providing more metalled roads throughout the rich agricultural tracts will soon be generally recognised. Both the new railways and the new roads will be far more serviceable, will contribute far more to the economic welfare of the country, if their location is determined as part of a carefully conceived and designed plan of the whole region in which they lie. The principles to be taken into account in determining the location of railways and roads will be considered later.

When attention is devoted to regional planning in India, it becomes evident that there are three distinct

types of regions. First in the order of importance and urgency of their problems comes the urban and industrial region. Of these the greatest are the tracts of country surrounding Calcutta and Bombay, and the coalfields, especially Jheria and Raniganj. Another industrial region is that including the great iron ore deposits tapped by the Tata Iron and Steel Company, which are bringing other enterprises into existence, and which extends to the coal-fields north and west. The regional planning of these areas is of urgent importance, and upon its efficiency much of the industrial prosperity of Calcutta and Bombay will depend.

The second type of region comprises the great irrigation colonies where waste lands are converted into rich agricultural tracts. In fact every large colonization scheme requires either to be treated as a region itself or to be specially planned with a view to the growth of population as part of the distinct region in which it happens to be located.

The third type of region consists of the great settled agricultural tracts which are already fully populated, but show no signs of industrialization. In these the problem is rather to provide most cheaply all means of communication required for the conversion of agriculture from its present primitive form to that of commercial farming in which the greater part of the crops are moved from the farm to markets near or far. We may speak of these three types of regions as the "urban" or "industrial type," the "colony", and the "rural type". We shall see that the methods of planning and the objects aimed at are necessarily different in each type, though the broad principles are the same. Every type of planning is, indeed, dominated by the principle of obtaining the maximum of social advantage at the least sacrifice in disadvantage and in monetary outlay.

CURRENT NOTES

During the past twelve months Indian trade has been dominated by the world-wide depression. We are now nearing the end of the cycle of trade—of the long cycle of which the War was the principal feature. Starting in 1910, when prices were at their lowest, following the boom of 1907, we have had all the usual phases of the trade cycle. The depression of trade of 1909-10 gave way to the steady expansion, which suddenly became greatly accentuated by the War, and ended in the boom of 1920. This was followed by the collapse of the autumn of 1920, which extended through most of 1921. During the past twelve months we have settled down into the depression with all its usual features of big stocks of commodities unabsorbed, prices in general still falling slightly, or remaining stationary, and a general absence of demand. The collapse of prices in 1920-21 was unprecedentedly severe; and the economic chaos and devaluation of currencies in Central Europe, and many other evidences, point to the conclusion that the present depression of trade will be long and severe. We may hope for some revival of foreign demand for Indian goods during the next twelve months; and this, together with the effects of the new tariff in reducing imports, will lead to a firmer exchange. On the other hand, the general price-level in India remains high, due mainly to the inflation of the paper currency. Some deflation has taken place; but Government has hesitated to apply the full rigor of the corrective by using the Gold Standard Reserve, being dominated apparently by the fear that too rapid a contraction of the circulation would create so great a stringency in the great Indian money markets that a financial crisis might be the

result. The trouble appears to be that in this country even important commercial houses, both European and Indian, have fallen into a weak financial position, and could not live without the continued assistance of the banks.

There is necessarily a choice between evils. Either the inflation of currency and credit is to continue, with consequent high prices and weak exchange, or deflation may be pressed to a limited and reasonable extent sufficient to bring down the price-level somewhat and create a favorable balance of trade, although it may involve the serious embarrassment or possible liquidation of a few commercial houses. In regulating the general policy of credit and prices the great banks of other countries work much more closely together in consultation with their Government than banks in India have yet learnt to do. The entire mechanism of inflation and deflation has recently been studied in great detail by numerous inquirers in England and America, and a definite policy in regard thereto can be formulated. In India we have not yet got the necessary financial statistics. We require to know punctually the total of bank deposits in the country, if possible monthly, or at least quarterly. We also require to know the trend of the general level of prices from month to month.

It is not generally realised how defective is the reporting of changes of price-level in India as compared with similar facilities enjoyed by the public in other countries. The only general index number for India, and one which has many unsatisfactory features, is that issued annually by the Department of Statistics, the series running from 1861 to date. Recently a monthly index number of wholesale prices has been

started by the Labor Office of the Bombay Government, and is published monthly in the "Labor Gazette". The study of fluctuations of prices in India has received an impetus from the epidemic of labor troubles in 1920 and 1921. As in other countries, the great rise of the cost of living led to numerous strikes: and advances of wages were in most cases conceded as being necessitated by the high prices prevailing. Being desirous of assisting employers in determining what advances of wages were justified by the higher cost of living the Government of India and some of the provincial Governments undertook investigations of the extent of the rise of prices.

The most tangible result of this movement was the establishment of a new Department by the Bombay Government entitled "The Labour Office", the object of which is to collect information as to wages and other working conditions and generally to watch over the relations between employers and employed. Statistics of wages, hours of labor, retail prices and rents, and of time lost in strikes, are collected and published; and the Office studies the labor legislation of other countries and from time to time advises Government as regards new labor legislation. Mr. G. Findlay Shirras, lately Director of Statistics for India, was placed in charge of this new Department; and we should like to congratulate him on the thorough manner in which it has been organized, and on the high quality of its monthly organ, the *Labour Gazette*. Unlike most Government publications it is printed in attractive style in good type; and it has many well executed diagrams. The matter is quite equal to the style. There are many interesting articles upon such subjects as Trade Union Legislation; the Industrial Disputes Committee; and the Indian Factories Act.

NOTE ON PRICES AND COST OF LIVING

The *Labour Gazette* publishes two series of monthly index numbers: (1) A cost of living index number based on retail prices, (2) An index number of wholesale prices. The cost of living index number is weighted on the mass unit system, the construction of which was fully explained in the first number of the *Gazette*, which appeared in September, 1921. Both series were calculated for some period back; and we quote them from the beginning of 1920 in the table on the opposite page. An index number of wholesale prices in Calcutta is also calculated monthly by the Director of Statistics, and is to be published in the *Indian Trade Journal*. The Calcutta index numbers are also quoted on page 325. The study of the general level of prices in a country, and its fluctuation from month to month, is of vital importance in connection with regulating the deflation of the currency from its present inflated condition. Index numbers relating to prices in Bombay and Calcutta only do not necessarily give an accurate representation of the changes of the general level of prices throughout India. With this object a monthly index number of prices has been compiled under the Editor's direction in the Economics Department of the University of Allahabad. It is not suggested that this index number fulfils the requirements of accuracy. The total number of commodities utilised is too small, being only 19, the choice being limited, as quotations for additional commodities were not available in a sufficient number of cities throughout India. The prices of each month are averages of quotations in ten different cities scattered throughout India. It will be seen that the index number as calculated in the Economics Department (see column 2 in table opposite) follows fairly closely the movements of the index numbers of Bombay and Calcutta. We have added the monthly index numbers of prices in England as calculated and published by *The Statist*.

MONTHLY INDEX NUMBERS OF PRICES AND COST OF LIVING

Month	Economics Department Allahabad ¹	Cost of Living Bombay	Wholesale Prices Bombay	Wholesale Prices Calcutta	"The Statist" England
1920					
January ...	100	182	231	218	289
February ...	98	180	219	209	306
March ...	93	177	211	198	308
April ...	92	171	224	200	313
May ...	91	173	217	210	306
June ...	93	180	222	206	301
July ...	94	189	220	209	300
August ...	94	191	217	209	298
September ...	96	192	218	208	293
October ...	99	193	210	206	282
November ...	100	186	204	194	263
December ...	97	181	192	180	244
1921					
January ...	91	169	191	178	232
February ...	89	162	191	174	215
March ...	87	160	190	175	209
April ...	89	160	198	183	200
May ...	92	167	199	184	191
June ...	94	173	197	178	183
July ...	100	177	199	183	186
August ...	103	180	203	184	182
September ...	107	185	207	187	176
October ...	104	183	195	184	163
November ...	102	182	193	180	161
December ...	101	179	190	180	157
1922					
January ...	97	173	190	178	156
February ...	95	165	186	179	156
March ...	98	165	192	182	157
April ...	95	162	188	182	159
May ...	96	163	189	187	159
June ...	97	163	190	183	160

¹ The quotations used for the Economics Department index number are: From the fortnightly prices (*Gazette of India*): rice (husked), flour (wheat), jawar, gram, arhar dal, linseed, mustard and rapeseed, ghi, raw sugar (gur), salt, tobacco leaf, turmeric, bhusa (white), coal (Bengal), sheep, and kerosene oil, at Calcutta, Benares, Cawnpore, Agra, Delhi, Lahore Bombay, Ahmedabad, Nagpur and Madras; and the prices (from *Capital*) of cotton (Oomras), cotton yarn (16's), jute (Jat 4's).

REVIEWS OF BOOKS

RELATING TO INDIA

The Bases of Agricultural Practice and Economics in the United Provinces. By H. M. LEAKE, Director of Agriculture, U.P. Cambridge: W. Heffer and Sons. 1921. pp. viii, 277. Price 15s.

A book on Agricultural Economics, with special reference to India, is always welcome when the author is a master of his subject. In the United Provinces students have for many years used the books of Mr. Moreland and Sir Theodore Morison. The book under review, which is based upon a series of lectures which the author delivered when he was Principal of the Agricultural College at Cawnpore, is in many ways of greater value for educational purposes. Before holding that position Mr. Leake was the Economic Botanist of the United Provinces. These two facts give the book its character. It is a text-book written in simple language and with many apt and interesting illustrations of the principles laid down. The mind of the economic botanist is plainly discernible not only in the systematic arrangement and treatment of the subject-matter as a whole, but also in the choice of subjects and illustrations. We learn more about soil physics than about the causes of variations of rental in place and time; more about hybridisation and acclimatisation than about the evolution of the agricultural system, or the villagers' implements. At first sight the student of economics may be rather repelled or alarmed by the chapters on physical and botanical subjects:

in reality they are written in simple style and should not present any difficulty to an intelligent student, whilst it is certainly of great importance that economists should understand the primary physical and organic laws on which economic facts have their basis.

Mr. Leake has divided his book into five parts. The first treats of man's dependence on vegetation and the evolution agriculture, which is traced in outline from the time of early jungle settlements to the ultimate establishment of commercial agriculture depending upon facilities of transport and remittance of money. In Part II the reader is introduced to the elementary facts of soil physics, the rôle of bacteria in the nitrification of the soil, and the effects of variations of temperature and atmospheric conditions. There are chapters on the "Control of the Conditions of Plant Life", and on "Limiting Factors and Disease".

We have met with no clearer exposition of the bases of agricultural practice compressed within so small a compass. Our only criticism of Part II is that here and there the student is expected to learn from too few words. We cannot imagine that anybody who has not studied physics could understand the causes of the movement of water under the influence of surface tension as there stated without considerable explanation by the teacher. Neither will the ordinary student understand the important facts relating to the "water-table" without a sectional diagram across a valley. We think too that the explanation of the formation of soils from rocks is too tersely stated to be intelligible. These, however, are minor criticisms: for the student will gain a general idea of soil physics which cannot but be useful. Some references might have been given to books on soils and elementary geology.

Part III brings us back again to economics, beginning with an elementary statement of the theory of value. A chapter is devoted to "Land, Labor and Capital", another to "Supply and Demand, and Markets". Then follow chapters on the "Ownership and Tenure of Land" and the "Supply of Agricultural Capital". In Part IV we come back again to Agricultural Practice, and learn something of its modern development. The chapters on Selective Breeding and Hybridisation are welcome on account of the need of popularising a knowledge of these principles in India. The chapters on

Cultivation and the Experimental Method contain just what every student ought to learn.

The later chapters of the book, constituting Part V, are devoted to the important practical problems in agricultural economics as experienced in Northern India. Several chapters are devoted to agricultural capital and to the principles of co-operative credit, as a means of supplying it. Three important chapters, which deserve to be widely read, deal with the "Zemindar's rôle in Agricultural Development", "the Government's rôle" and the "Cattle Problem". The author points out that in the United Provinces the area available for grazing is only two-thirds of an acre for each head of cattle, which is less than is required to support strong and healthy cattle if the pastures were producing many times as much grass as the waste lands which are generally called pastures in this country. He concludes that stall-feeding must be resorted to in India as in other countries; and this involves the growing of fodder crops, the value of which the people must learn to appreciate.

The first four Parts of the book are intended as a textbook and the author avoids controversial topics and the expression of his own opinions. The last Part necessarily touches on controversial questions. The author's scientific training and judgment entitle his opinion to respect. We must venture, however, to differ from him in his opinion that the time has arrived when the construction of the metalled roads, so urgently needed throughout these Provinces, can be left to the initiative and finances of the District Boards. Zemindars, who will not even lay out capital in developing their own estates where they would get a direct return, are not likely to tax themselves to provide metalled roads for other peoples' use—not until a more enlightened and educated generation has arisen.

We hope this book will be widely read. Its importance lies not only in the information it gives, but in its mode of treatment. It is dominated by the idea and method of scientific enquiry; and also by the spirit of progress and reform. It is not unfair to say that the rulers of these Provinces (we mean members of the Indian Civil Service), whilst they possess plenty of information, often of an extraordinarily detailed character, usually lack just what Mr. Leake's book can give them—the scientific attitude of

mind. Most of them also lack the belief in the possibilities of progress, and a realization of the value of experiment. Land-owners also should read this book. It is suitable (except in price) for B.A. students, happening to cover in fact a substantial part of the Allahabad University course. The book should be in every college library; and we may be permitted to hope that the public reception will be sufficiently good to enable the author to bring out a second edition at a much reduced price, which would place the book generally within the reach of students.

H. S. JEVONS

Studies in European Co-operation. By C.F. STRICKLAND, I.C.S.
Lahore: Superintendent, Government Printing, Punjab,
1922. pp. iii, 166, v. Price Rs. 3-8.

This volume is a companion to the "Co-operation in Germany and Italy" by Mr. Darling, which is reviewed below. The two authors were deputed jointly to study the conditions of European Co-operation in 1920 in such countries as could be visited in four months. Whereas Mr. Darling has dealt with the general conditions and principles of the organization and working of co-operative societies of various kinds, Mr. Strickland has devoted himself mainly to descriptions of particular societies which were investigated during the authors' tour. Many books have been written about co-operation in the Continental European countries; but we do not know of any which gives in a small compass so much detailed information regarding typical societies of various kinds. The individual or primary societies for credit, purchases, sales, cattle breeding, insurance of live stock, and many other purposes are described, including the "reconstruction societies" brought into existence as a means of re-establishing agriculture after the ravages of the recent War. The various unions, federations and associations are also described; and we learn for the first time something about the international co-operative trading societies which have been established since the war. There is an interesting account of the co-operative farming societies in Italy (not merely credit societies), which have been formed mainly by socialists and catholics. Whilst the first three chapters deal with Holland, Belgium and Italy, Chapter IV deals with England,

and puts within the reach of Indian readers a concise account of the co-operative movement there, which is very strong on its industrial side, and has in recent years progressed rapidly on the agricultural side also, mainly through the establishment of the Agricultural Organization Society and the Agricultural Wholesale Society, Limited, which is the central organ of co-operative purchase for agricultural societies. The last three chapters are of a general character, relating to the functions of co-operation, the duty of the State, and "Co-operation in the Punjab." The interest of these last three chapters lies in the fact that the well-known principles of co-operation and Indian practice are reviewed in the light of the information gained by the author in his European tour. The book as a whole is a mine of the most interesting information collected by an observer enthusiastically devoted to the co-operative movement; and it will be read in India with much interest and advantage.

Sixty Years of Indian Finance. By S. P. SHAH, Bombay: at the Bombay, Chronicle Press. 1922. pp. xii, 460, xiv. Price Rs. 10.

A general work on Indian Public Finance has been sorely needed for the past twenty years; and the author has boldly ventured on the formidable task of supplying this want. If he has not succeeded in producing the book that everyone desires, he has certainly made a very fair attempt, and has provided a mine of information regarding Indian Finance during the past sixty years, including numerous and comprehensive tables of statistics and abundant references to, and quotations from, original authorities.

The book is divided into seven parts, of which the first is introductory and surveys the principal sources of revenue, the principal channels of expenditure, and the public debt and administrative organization. Part II analyses public expenditure in detail, with the historical background fully set out. The cost of national defence, of the maintenance of peace and order, and public expenditure on moral and material development are examined, and the closing chapter deals with the expenditure of the Government of India in England. Part III is devoted to the revenues, and is perhaps of the widest general interest. After some general

considerations, and classification of the Indian revenues, there are two chapters devoted to the land revenue and the income-tax respectively. Then follow chapters on the various indirect taxes—stamps, salt, opium; the excise and customs duties. Finally the revenues from public works and railways are discussed, and the possible new sources of revenue. Part IV deals with public debt from about 1850 to the present date; Part V with War finance and the "peace budgets" (1919-20 and 1920-21).

Part VI is devoted to "Financial Organization", and contains a useful historical review of the successive re-organizations and hesitating steps in the direction of decentralization, culminating with the separation of Provincial finance in the recent Reforms. The machinery of the control and the audit of accounts is also briefly considered. Part VII is devoted to Currency and Exchange; and in view of the fact that the author had previously written on the Indian currency system he has confined himself to a brief review of the position of the currency as it remained after the War, with some suggestions for the adoption of the gold standard and gold currency in circulation. In an Appendix the author sets out in the form of a draft bill his proposals for setting the Indian currency and exchange upon a permanently stable basis, the note issue being handed over to the Imperial Bank.

In writing this book the author has in reality had four objects: (1) to write a history of finance during the past sixty years; (2) to exhibit the financial system as it at present stands, (3) to explain general principles of public finance as generally accepted in civilized countries and their application to India; and (4) to make his own proposals for improving the system of taxation and financial organization and currency. The author has our admiration for his enterprise and industry; but we think he would have been better advised had he treated these subjects in four separate volumes. In the present volume all these aspects of the subject are treated in each part of the book; and in almost every chapter we find history followed by details of the existing system, then the author's criticism and suggestions. The reader who may wish to obtain a connected idea of the existing financial system within a brief space of time may be excused for feeling some impatience in having to search for the information amidst a mass of historical matter and with his attention diverted by the

author's own ideas. It would be too much to expect that such a comprehensive work could be accurate in all its statements; and so far as we have been able to observe there are not many errors. It is not correct, as stated on page 56, that the gain or loss of exchange is credited or debited to the Gold Standard Reserve. The loss or gain falls upon the general revenues, although adjustments as between England and India may for convenience be made through the Gold Standard Reserve. •

The author's suggestions for financial reform mainly follow the school of Dutt and Gokhale; but some of his suggestions are worthy of careful consideration, as, for example, his proposal of an excise or monopoly of tobacco growing and manufacture. In some of his proposals, however, he contravenes economic principles and underestimates administrative difficulties. In dealing with the land revenue he fails to explain that the contention of certain critics of Government that land revenue should be fixed at a definite share of the gross produce of the land rather than the net produce is economically unsound; and one is left to infer, with some hesitation, that the author himself favors the revenue being assessed as a share of the gross produce. He is also in favor of the principle of grading land revenue, or granting an abatement, in accordance with the income of the landholder, which again is economically unsound, as it would put a premium on the further subdivision of holdings and the mere growth of population.

We have serious criticisms to offer of several of the author's theories and proposals, and we feel that his handling of the masses of statistics quoted is unskilful and that really important data are not utilized. Still he has done useful work in collating in one volume so much information as to the history and present position of Indian public finance. The subject is a vast one which has never yet been adequately treated by any author.

The production of the present volume certainly does not do it justice in appearance. It is printed in very small type by a firm which evidently is not accustomed to arranging matter in book style, and the binding in a cheap black cloth is mournful in the extreme. Doubtless the book would be very expensive to produce in attractive form; but economies which give a bad impression are often false economies. (H. S. J.)

REVIEWS OF BOOKS

ENGLISH AND FOREIGN

Modern Finance. By EMILE BURNS. ("World of Today" Series) Oxford: Humphry Milford (Oxford University Press). 1920. pp. 64. Price 2s. 6d.

The Oxford University Press deserves to be congratulated on the series of valuable little books called "The World of Today", dealing with current problems of politics and economics in a way which is well calculated to educate the public as regards some of the most important topics of the day. A series which includes contributions by such eminent writers as Pigou, Bowley and DeLisle Burns is sure to possess a high educational value. At a time when it is fashionable to reiterate the sinister threat that "all economic doctrines are in the melting pot", it is reassuring to have the treasures old and new of our science brought out and rearranged for public view.

It required great courage on the part of Mr. Emile Burns to undertake to deal with the vast topic of "Public Finance" in some sixty pages. But in the main he has achieved his task admirably. Of course, looking to the limitations of space, it would be futile to expect that each of the problems discussed would be dealt with adequately. It suffices if the outlines of the subject are traced clearly and with a skilful hand, if the proper perspective of the constituent problems is duly observed; if the setting of topics is such as to throw light on their true nature and mutual relations and if the new features of each topic are brought out lucidly. All these requirements have been worthily met by Mr. Burns whose little book deserves to be unhesitatingly recommended as a first sketch of his subject not only to the general reader but to our college students.

The book opens with a description of bank deposits and of the variety of investment—the former representing in some sort the demand side and the latter, the supply side of the matter. Leaving behind these elementary topics we

come to three of the best chapters in the book—"the function of banks in starting industries", "the function of banks in running industries" and "the tendency of industries to finance themselves". The first deals with the business of underwriting shares by banks—its methods, results and some drawbacks. There are alleged notorious cases where banks have tried to unload the shares on their hands by using the financial columns of the press to "boost" the shares or by stock-exchange manipulations to raise their prices. While on this subject, Mr. Burns might have added something as to the methods of participation by banks in the promotion of new companies in America and Germany—a matter on which Dr. Marshall has recently made valuable contributions. At any rate, however, our little book has given us a satisfactory study of the methods and results of underwriting by banks. Mr. Burns deals next with the help given by banks in running industries, and outlines in this connection the nature and functions of the ordinary bill of exchange. He also discusses instructively the connected issue—why banks, generally speaking, prefer a bill of exchange arrangement for giving loans to a simple overdraft process. Here also the author might have been expected to notice foreign banking methods of supporting existing concerns.

A highly interesting study is made of the tendency of industries to finance themselves. He shows how, owing to various factors like concentration among industrial concerns, the increasing tendency not to distribute yearly the total balance of profits, and the amassing of reserves, the older and larger industrial concerns are becoming independent of financial assistance from the banks. The resources thus accumulated are either used for the development of the concern itself or are utilised in buying up other concerns, usually in allied or subsidiary spheres of industry. This process tends to withdraw from circulation through the banks large quantities of money that would otherwise have passed through their hands. In a word the bank's lending resources tend to decrease as the result of the process and so also the help they can afford in the starting of newer concerns. Should the banks try to offset this state of things by the creation of more credit money they would only succeed in raising prices and consequently the rates of interest. This would put more difficulties in the way of the starting of

new concerns and assist the extension of the established and large-scale businesses. This argument of Mr. Burns is a very neat piece of theoretical work and clearly exhibits one of the most important conditions and causes of the monopolistic operation of industries.

The next chapter is entitled "International Finance", but it deals mainly with foreign exchanges. We cannot, of course, expect in this little book a consideration of the new contributions by Professor Cassel and others on that most important subject. But the factors influencing the rate of exchange under normal circumstances have been clearly expounded, and this exposition followed by a due emphasizing of the factors which have assumed special importance in the present abnormal situation of the war. First among these factors is the general level of prices in each country—an indication of Mr. Burn's agreement with and acceptance of Professor Cassel's views. This willingness of banks to create credits abroad is then introduced as another of the factors. This willingness depends upon the current rate of interest in the first instance, and in the second place on the time within which the balance of trade can be expected to be righted. Last come the psychological factors which affect the bank's willingness to create credits, and also the action of speculators in exchange.

The very wide scope of this little book is indicated by the inclusion within it of the subject of financing the war by loans and the discussion of the methods in which the banks contributed to the subscription of the loans. Thus it is pointed out that a very large proportion of the amounts was raised, not by attracting surpluses but by creating credits—the effect being to earmark future surpluses on ordinary trading transactions for the repayment to the bank of the credit which it created and lent.

Small as the size of the book is, Mr. Burns aspires to review in it not only the multifarious problems of contemporary finance but also to anticipate therein the financial conditions of the future communist state. Our "money of account", based as it is on conventions, will under communism be made of "no account". For our financial system, useful under a system of private ownership, is really no more essential to industry, and use of the products of industry, than are the stock and share certificates of companies. The

shadow of communism has fallen on our literature whether of politics or of economics, and neither Lord Bryce, writing his great and most recent work on politics, nor Mr. Burns working at his excellent little study of modern finance can think the task of each complete without devoting a chapter to the possible condition of his subject under communism.

J. C. COYAJEE

The Founders of Political Economy. By JAN ST. LEWINSKI, D.Ec.Sc., Professor of Political Economy in the University of Lublin, Poland. London: P. S. King and Son, Ltd. 1922. pp. viii, 169. Price 6s.

In this small volume the author sets out "to find among the doctrines advanced more than one hundred years ago such theories as still today can help us to understand economic phenomena". He has met with very considerable success, for in a clear, succinct style he leads his readers through the great works on Political Economy, and points out forcibly the chief contributions made by each of the writers.

The first chapter on "The Beginnings of Political Economy" is in some ways the most interesting, and, to the teacher, the most useful one in the book. In it an attempt is made to trace back to their beginnings many of our economic laws, and the author finds in the writers of the 14th, 16th, and 17th centuries, at times vague glimmerings of economic theories formulated later, and in other cases a fair approach to the truth. Nicolas Oresme, writing in the second half of the fourteenth century gives, as is shown, a moderate statement of the evils that follow the debasement of a currency, and Copernicus writing in 1526 sets down as the four most dangerous "among the innumerable calamities which ordinarily cause the downfall of kingdoms"—"discord, great mortality, sterility of the soil, and the deterioration of money"—(quoted p. 10)—and naively remarks that "as regards the fourth, very few, some men of great ability excepted, take any interest in it" . . . "because it ruins the state not at once, but by slow degrees".

The treatment of the physiocrats is good and compact, and the charge that Adam Smith was guilty of gross plagiarism from the works of Turgot is distinctly refuted. The debt of Adam Smith to the Physiocrats is clearly set forth but the discovery of the Course of Lectures delivered by him in 1763 in the University of Glasgow, seven years

before the publication of Turgot's *Reflexions* (1770), has quite dissipated the old myth.

Nearly one hundred pages are devoted to Adam Smith and Ricardo. Though we entirely concur with the criticism of Adam Smith, we must admit that there is little which has not been said before. The writer's conclusions agree closely with those of Prof. J.S. Nicholson in his various writings on Adam Smith, and if these are known to the author it is strange that no reference is made to them. The writer disposes completely of the contention so common on the Continent that Adam Smith based his great economic work on a one-sided analysis of human nature, and recalls that *The Wealth of Nations* is only a part of a work which embraced the whole of social science. Commenting on Adam Smith's social policy he puts another nail in the coffin of the old delusion which regards Adam Smith as the opponent of every intervention of Government, and affirms that "reforms which he advocated are quite in accordance with the spirit of the nineteenth and twentieth centuries". As for Adam Smith's method, that of "having established some laws by way of *deduction*", and then verifying and correcting them "by way of *induction*" the author has nothing but praise, and justifies it most successfully in the face of the attacks that have been made upon it by the representatives of the Historical School. Many of Adam Smith's conceptions, it is shown, were not new, but what in the hands of his predecessors were "rude fragments"—became artistically worked out masterpieces in *The Wealth of Nations*.

Full justice is also done to the great contributions made by Ricardo to economic theory, and the writer is obviously not one of those who share the opinion of Jevons that Ricardo, "that able, but wrong-headed man, has shunted the car of economic science onto a wrong line". There is much of interest in the discussion of Ricardo's theory of value, his treatment of wages, profits and rents, and the quantity theory of money. The famous Ricardian theory of rent the writer traces back in a crude form to Petty, and Ricardo himself in this connection acknowledges that Malthus and an anonymous writer had "presented to the world, nearly at the same moment, the true doctrine of rent", and this was two years before the publication of Ricardo's

Principles. But says our writer, though "the theory of differential rate (?rent) was known already before Ricardo, he for the first time deduced from it all its consequences" To Ricardo we owe "the most precious gems of political economy—the theory of value, and the theory of rent".

No doubt there will be many who will consider the author's summary of the Post-Ricardian period as too pessimistic. *Von Ricardo zur Vulgarökonomie* he considers "too crude", yet "during a period of now more than a hundred years the progress of political economy has been very slow, and the results very poor in comparison with the efforts which were made". And again, "taken as a whole, the theoretical advances of political economy since Ricardo's *Principles* are comparatively irrelevant". This is ascribed largely to the separation of theory from the observation of reality, and the author adduces certain forecasts made during the war by prominent German economists to show "the deplorable state of political economy" at present. Whether this be accepted or not, few will gainsay the suggestion put forward that the path of real progress in future lies largely in a return to the methods of the earlier writers, "the combination of theory with the observation of reality."

W. H. MYLES

Supply and Demand. BY H. D. HENDERSON, Lecturer in Economics in the University of Cambridge. London; Nisbet & Co., 1922. pp. x, 177. Price 5s. net.

The volume under review is the first in the series of the Cambridge Economic Handbooks, six in number, of which two have just been published. The Handbooks, written by some of the most distinguished of the younger Cambridge economists, aim at a systematic exposition of the principles of economics and should prove invaluable textbooks for students in India. Teachers of economics in this country often meet with the difficulty that their pupils fight shy of books like Dr. Marshall's *Principles of Economics*, and they prefer to derive their knowledge of theory from the works of lesser people. Two very grave defects thus manifest themselves, namely, knowledge of sound theory is not attained and, secondly, no acquaintance is made with the analytical methods of tackling economic problems. To a great extent such an attitude on the part of students is due

to the inherent difficulties of the subject; and an exposition by a smaller man, with his clear-cut formulæ carrying conviction, finds favor with the students. With the appearance of the volumes in the above series, that difficulty should be overcome. Instead of asking students to find their way to the works of the Master through the books of smaller people, of doubtful orthodoxy and indifferent merits, these Handbooks, issued by Cambridge men, who have imbibed and inherited the Cambridge tradition, should form a useful introduction to the works of the acknowledged leader of economic thought. Books V and VI in Dr. Marshall's treatise have been the stumbling blocks in the way of students. Mr. Henderson's book should prove a valuable commentary on those difficult parts, which form the backbone of all economic reasonings. The author begins his exposition with an examination of the order prevailing in the economic world and comes to the conclusion that uncontrolled, unorganized, undirected, the adjustments of supply and demand take place through the medium of price. Even if the ordinary affairs of the world were in the hands of a socialist dictator, it would be necessary for him to evolve some such instrument to bring about the adjustments of supply and demand. That is the thread which runs through the whole of the book: that an equilibrium between demand and supply is effected through the agency of price. In the second chapter, the author formulates the laws according to which these adjustments take place; and in the third and fourth chapters he examines critically the relations of price, utility and cost of production, laying stress on marginal determination of those factors. Chapter V is devoted to an analysis of the complicated relations existing between different commodities and also services of many kinds. Relations of joint supply, of joint demand, of composite supply and of composite demand are clearly set forth, and also the principles governing the values of such economic goods. Chapter V should be of great assistance to teachers and students alike in giving them a firm grasp of an admittedly difficult subject in pure theory.

The next four chapters are given to an analysis of the factors of production and of the reactions produced in the supply of these different factors by changes of price. The author's conclusions may be stated in his own words: "that

in no case do we find that the aggregate supply of the agent was determined by clear and certain economic laws, possessing any fundamental significance. For instance, in the case of capital, it cannot be said that the particular rate of interest which happens to prevail is a measure of the sacrifice involved in saving. As regards the apportionment of the factors of production among different uses, however, we do find relations which are both clear and fundamental."

The volume covers ground which is the most difficult in economic theory, and the author is to be congratulated on the success which he has been able to achieve in his exposition. Without a sound knowledge of theory, our social enthusiasm is apt to hurry us into an acceptance and adoption of remedies, which will ultimately cause more harm than good. This is specially true in India at a time like this when all manner of remedies are recommended for the cure of social ills. The legislator, the leader and the student have to go back to theory, for obtaining both light and fruit.

There is just one misprint which the reviewer has been able to detect in this otherwise flawless book. On page 46, speaking of the marginal purchasers, the author is made to say that if the price falls, the marginal purchasers will curtail their consumption of a commodity. That surely cannot be.

Money. By D. H. ROBERTSON, M.A., Fellow and Lecturer of Trinity College, Cambridge. London: Nisbet & Co. pp. xii, 178. Price 5s. net.

In reviewing Dr. Irving Fisher's book: *The Purchasing Power of Money*, in the pages of the *Economic Journal* in 1911, Mr. Keynes gave expression to the opinion, the correctness of which will be certified by all students who have come into contact with Cambridge that "monetary theory in its most accurate form is a matter of oral tradition in England." Much of what is valuable in the substance of that tradition has now been written down by Mr. Robertson and made available for students, who will be thankful to the author for accomplishing a difficult task with such great success. The connection of the second volume of the Cambridge Economic Handbooks, with its predecessor, *Supply and Demand* by Mr. Henderson, is to be found, as explained by the author in the preface, in the emphasis laid on the theory of money as a special case of the general theory of value; and its

bearing on the remainder of the series is to be found in the conclusion to which the book leads up that money is after all an unimportant thing and it cannot provide a remedy for the depressions, the roots of which lie deep in the present structure of industry. The author introduces us to the subject with a definition of the term money, and in the discussion embodies the view of Dr. Marshall expressed in his oral evidence before the Gold and Silver Commission of 1888 that it does not matter very much what meaning we adopt so long as we stick to it, or, at any rate, do not change it without making it clear that we are using the term in a different sense. In a short and weighty discussion in Chapter II, distinction is made between the devices, necessarily defective, for measurement of a change in the value of money, and the forces by which the value of money is really determined; and the proposition is laid down that the value of money is determined, like the value of anything else, by the conditions of demand for it and the quantity of it available which may, however, differ from the quantity of it in existence.

The rest of the chapter is an amplification of this proposition in the course of which a well balanced statement is made of the Quantity Theory of Money. An illuminating classification of the different kinds of money is given in Chapter III, and with the help of this classification Mr. Robertson is able to establish the proposition that the quantity of all other kinds of money is determined, more or less, in reference to the quantity of standard money; and thus he tracks down the value of money to the quantity of the precious metal, gold or silver, contained in a full-bodied coin and equates it to the cost of production of the precious metal.

In Chapters IV and V the author deals with the effects produced on the price-level by the creation of bank-money, and discusses the monetary history of England during the late war. As regards the rehabilitation of the Gold standard, his conclusion may be given in his own words: (p. 134) "If we are asked whether we should like to go back to the gold standard, we shall perhaps reply: 'on the whole, yes: not because it is a good standard, not because there are not better available, but because it is better than no standard at all, which is in practice at present the most likely alternative'." The subject of Foreign Exchanges becomes, in Mr. Robertson's

hand a simple matter, and the whole of Chapter VII is a brilliant exposition of Gustav Cassel's thesis that the rate of exchange between two countries with independent money-system, tends to measure the relative purchasing power of the moneys of the two countries over those goods which are the subject of trade between them. The practical result of various measures advocated at the present day is summed up in the concluding chapter, in the words of the poet, quoted in the book:

"The end men looked for cometh not,
And a path is there where no man thought."

The book would have been the better, as regards facility of reference, for an analytical table of contents in place of the bare mention of topics of discussion under each chapter. As for misprints, just one small error of two zeros, in these days of high figures, is made to engender on page 107 a deposit a hundred times larger than the loan.

L. K. HYDER

The Fundamental Principles of Taxation in the Light of Modern Developments. By Sir JOSIAH STAMP, K.B.E., D.Sc.
London: Macmillan & Co. Ltd. 1921.

This work is an admirable and timely contribution to the literature of finance and will take rank at once as one of the standard text books of the subject. The development of economic theory would in itself have necessitated such a lucid statement of the fundamental principles; the great number of experiments and expedients which the great war and its sequelæ have necessitated had also to be fully considered in the light of theory and of practice; finally, the results of the labors of a considerable number of financial committees and commissions were waiting to be assimilated and digested into the body of financial theory. At such a time the need of a restatement of the fundamental principles was urgent. The danger was that in the hands of an inferior writer the particular problems and their unessential details would have overshadowed their theoretical significance. It required a writer of Dr. Stamp's powers to remain unstag-gered by the mass of details and to trace in them the workings of familiar principles. Moreover, the saving grace of humor—not generally vouchsafed to financiers—is his, and his book is not only highly instructive but pleasant

reading. Again, he is not merely a theorist dealing with financial abstractions; his practical experience in financial work has impressed on him the human aspects of the work of taxation.

The work opens, very properly with a general discourse on the trend of recent developments in finance. We have a particularly good discussion of the well-known generalisation that "taxation at first personal, becomes specific and then personal again." The thesis has a great historical past and goes back to Montesquien's dictum that "the excise is an attribute of liberty." Attention might also be drawn to the fine analysis in Dr. Stamp's book of the difficulties involved in the economic conception of taxable income and to the discussion of the comparative merits of the different principles on which progressive taxation has been based and justified. The sound and conservative instincts of our author lead him to conclusions which, we are afraid will not easily satisfy, the hotspurs of finance. The two main principles of graduated taxation which can be derived from the principle of diminishing utility are those of least aggregate sacrifice and "equal sacrifice", and the former is pronounced to be the more dangerous because it is more arbitrary and likely to be employed by socialistically-inclined legislators for the pure confiscation of the higher reaches of income. Dr. Stamp's sound common sense also leads him to emphasize anew the impossibility of obtaining from the faculty theory a definite mathematical rate of progressive taxation. Evidently the experience both of progressive taxation and of democratic tendencies at close quarters has sobered our financiers; for only twenty years ago, such a financial authority as Cohn could make light of both these difficulties.

Those who are interested in the recent controversy relating to the imposition of income-tax on co-operative dividends will find an up-to-date statement of the opposed position in the present work. A topic of much greater general interest is the proposed exemption from the income-tax of the income from savings. Several great economists including Prof. Pigou had argued in favor of such exemption. Dr. Stamp's arguments on this well-worn topic deserve careful attention. He argues, in the first place, that such exemption of savings can clearly not be justified on the principle of ability alone. Further, he shows that it is a misnomer to call the taxation of income

from such savings, "double taxation". Finally, he urges that the claim is really to *favor* savings rather than to remove a burden from them.

Proceeding to notice some other old controversies on which Dr. Stamp has shed new light, we have rarely seen a better critique of the position that it is impossible to tax the working-classes and that any tax which they may appear to pay is actually thrown off by means of increased wages on the other classes. As regards the economic effect of death-duties, Dr. Stamp adequately supplements the exposition of Prof. Pigou. Of great importance is another thesis propounded by Dr. Stamp that any attempt to get a perfect system of taxation by taxing expenditure on articles leads to regressive taxation. The argument modifies to a certain extent some observations of Dr. Marshall in that admirable work—*After-War Problems*.

We have only a little space left to indicate briefly some of Dr. Stamp's contributions to the appraisement of the more recent developments of finance. A "Special Ability" theory is propounded as regards the proposals for various forms of war-wealth taxation. The discussion comparing the effects on the national dividend of a capital levy and of a high income tax is of special value in these days; and the conclusion emphasizes the serious diminution of the saving powers of the community as a whole liable to be caused by such a levy. Valuable criteria are laid down to help towards a decision of the conflicts between "origin" and "residence" as the basis of liability to taxation. This aspect of "double taxation" has assumed great importance; and such sound suggestions of a practical nature towards clearing away the attending difficulties entitle the author to our gratitude. The student of finance will also welcome Dr. Stamp's views as to whether progressive taxation finds its justification in the assistance which it affords to the rectification of inequalities of distribution. The fact is, as our author points out, that progressive taxation does assist in rectifying such inequalities, but that it does not exist to do so, and it has its justification quite apart from this. He shows, similarly, that the discrimination between "earned" and "unearned" income does not turn on the same "dynamic policy" of altering inequalities in distribution. In general, we are glad to find that certain dangerous socialistic and new fangled views of finance receive short shrift at the hands of Dr. Stamp. On the

other hand, as becomes a practical worker in the field of finance, he devotes great attention to the practicability of financial proposals, and draws attention to the weak points in the working of preferential tariffs, capital levies, luxury taxes and other financial resources.

We conclude by recommending the work heartily for the serious study of all students of Finance. It also fully deserves to be prescribed by all Indian universities for their M. A. courses in economics.

J. C. COYAJEE

Elements of Statistics. BY A. L. BOWLEY. Fourth Edition. London: P. S. King & Son, LTD. 1920. pp. x, 459.

A First Course in Statistics. By D. CARADOG JONES. London: G. Bell & Sons, LTD. 1921. pp. 286. Price Rs. 9.

Readings and Problems in Statistical Methods. By HORACE SECRIST. New York: The Macmillan Company. 1920. pp. xi, 427.

A decade ago statistics found no place in the curricula of universities and colleges. Today we find that it holds a prominent place in the courses of study for degrees in commerce and economics, and for the Indian Civil Service examination. This change has been brought about largely by the prominence given to the subject in Western countries as a consequence of the experience gained during the War, when the value of the employment of statistical methods, not only in the economic but also in the military activities of nations, was again and again demonstrated. This "change in the angle of vision" has created a demand for text books which has to some extent been met by the publication of a number of works on the subject during the last two or three years. Prominent among these are the three books under review.

Dr. Bowley's works require no introduction to Indian students, as both his *Manual* and his *Elements* have been largely used as the chief text books for University courses. The publication of a new and revised edition of the *Elements of Statistics* enables Dr. Bowley's book to retain its position as the most detailed, comprehensive and authoritative work on the subject, although other works may claim merit for other qualities. Like the earlier editions, the book is divided into two parts (each of which can be purchased separately). The first part deals with "general elementary methods"

(collection of data, tabulation, averages, measures of dispersion, skewness, graphic method, accuracy, index numbers and interpolation), and the second with the applications of mathematics to statistics (frequency distributions, the normal curve of error, the law of great numbers, correlation, etc. Part I remains substantially the same as the previous editions except that it has been revised and brought up to date. It deals with those parts of the subject which cover very largely the courses framed by the universities in India. Part II however, is essentially a new work, completely re-written and considerably extended. It now postulates a knowledge of the calculus up to the standard of degree courses. Even with the necessary preliminary training, the average student will find it difficult to follow the somewhat involved abstract reasoning. A large number of examples have, however, been added, which assist one more readily to grasp the meaning and use of the formulæ. The whole of this portion of the book forms a very complete treatment of the introduction to mathematical statistics.

Mr. Jones' work follows the same lines as those of Dr. Bowley's *Elements*, i.e., the first part is largely non-mathematical and the second, mathematical. It is intended as a first course in statistics and accordingly deals with much the same subject matter, although not in such detail. It claims to be primarily written to enable the student to surmount some of the difficulties which usually confront him, and with which the larger and more advanced textbooks do not deal. This being the object of the publication, it is unfortunate that the author, a mathematician, at times forgets the claims of the non-mathematical student. We cannot, for instance, share his opinion that Part I "should be well within the understanding of the ordinary person". The employment of algebraic formulæ and the use of elementary conics could have been avoided in the treatment of graphs. Moreover it would have been better to pay more attention to the general principles of drawing graphs and to logarithmic curves, ogives, etc., than to geometrical political economy, the treatment of which is out of place in a work on statistical methods. As a simple statement of general elementary principles, the book is useful, although it in no way lays claim to originality of treatment. Its utility would have been increased by the addition of an index.

After two purely theoretical works written by mathematicians, we find Dr. Secrist's *Readings* very refreshing. Written largely from the practical standpoint, Dr. Secrist records to a great extent his personal experience in handling practical problems. No one who reads the book will question the value of the application of statistical methods to agriculture, commerce or industry—in fact, to any sphere of human activities. The author shows us the importance of obtaining data relating to different phases of life and with the aid of numerous examples explains in detail how enquiries have been conducted. The nature of these enquiries is very varied, ranging from timber estimates to saloon (public-house) statistics. While Dr. Secrist has dealt with the important subject of "compilation of data" very thoroughly, he has not neglected the treatment of the methods of analysis (averages, measures of dispersion, etc.). Nevertheless, we would not recommend the book as an introduction to the latter. Nor is this the author's intention, as he regards *Readings* as a work which should be read in conjunction with his previous publication, viz: *An Introduction to Statistical Methods*. The Indian student may experience some difficulty in understanding some of the terms employed by the author—terms which are only intelligible to those experienced in reading American books. From the Indian standpoint, this is probably the main defect of the book. Otherwise the work is stimulating, and should do much to dispel the idea that statistics is an uninteresting study of dry facts and figures.

We have offered no detailed criticisms of these books mainly because the purpose of this review is to aid students in selecting those books for study which are most suited for their requirements.

A. R. BURNETT-HURST

Allied Shipping Control—an Experiment in International Administration. J. A. SALTER, C.B., Secretary to the Allied Maritime Transport Council (Carnegie Endowment for International Peace—Economic and Social History of the world War, British Series) Oxford: Clarendon Press. 1921. pp. xxiii, 369, 5. Price 10s. 6d.

The various forms of national economic organization called into existence by the stress of War will form a highly important subject of study during the next generation. It is

probably too early yet to expect any impartial and authoritative judgment of the results obtained. The value of the present volume lies in the fact that it is the work of the Secretary to the Allied Maritime Council, who was also Chairman of the Allied Maritime Transport Executive—the body which controlled the distribution of merchant tonnage for various purposes amongst all the Allied nations in the later stages of the War. In the author's view the submarine menace became the central factor during 1917 and 1918; and it was met on the one hand by direct naval action, and on the other hand, by hastening the construction of warships and distributing the ever-diminishing available tonnage for the most essential services. The last was the task of the Allied Maritime Transport Council and its executive; and the author gives as a vivid and authoritative account the measures taken to control shipping and for the transport of necessary commodities to England, France and the other allied countries.

The economic and strategical problems which had to be faced are discussed; but the main object is to describe the administrative organization, and the series of measures which it devised. Much official information not elsewhere available is given in the body of the book and in the appendixes, in which also many original documents are reproduced in full.

Probably no one had a more intimate inside knowledge of the working of this very important organization than the author; and probably this book will be the foundation of future study of the subject. We cannot help feeling, however, that the Editorial Board of the Division of Economics and History in the Carnegie Endowment should not consider the volume under review as a final study of the subject. A description of important public work by an officer closely concerned therein is extremely valuable as giving the aims and objects which it was sought to attain and a description of the measures adopted and of the relative importance attached to them and the degree of success believed to have been attained by each.

Yet such a study is necessarily *ex parte*, and the results of an enquiry by a strictly impartial investigator might give very different weight to some of the conclusions. We do not find, for example, any critical study of the effi-

ency of the international organization which was built up, except a general statement as to the necessities of new measures. Every one is acquainted with the stories of mismanagement of the shipping control which gained a wide circulation soon after the conclusion of the Armistice—how a ship loaded with sugar arrived at the London docks to find the warehouses so full that it could discharge little or none of its cargo and the sugar had to be sent back again across the Atlantic; how a ship was completely lost for six weeks, so far as official knowledge in London was concerned, and was ultimately discovered to be lying in Colombo harbour waiting for orders. Perhaps a few such mistakes are of trifling importance compared with the advantage of the control system in giving the country the essential food supplies. However, whilst welcoming this volume, we feel there is room for a further work. The later chapters, on the principles of international administration, are suggestive and full of interest.

Effects of the Great War upon Agriculture in the United States and Great Britain. By BENJAMIN H. HIBBARD, Professor of Agricultural Economics, University of Wisconsin. (Carnegie Endowment: Preliminary Economic Studies of the War, No. 11) New York: Oxford University Press, 1919. pp. ix, 232.

Written with an outlook typically American, and with special reference to American conditions—there are three times as many pages devoted to the United States as to Great Britain—this volume must be regarded as more or less what the series indicates—a “preliminary” study of the subject. The data in no case extend beyond 1918 and do not touch the post-armistice period.

A short review is given in the case of both countries of the trend of the food problem before the war, showing America a country of surplus food yet with that surplus yearly declining, and England in marked contrast to most of her continental neighbors becoming increasingly dependent on trade for her food supplies.

The problem in relation to food supply that faced the two countries on their entry into the war led to measures of two kinds, one to stimulate production and the other to conserve consumption. A very full account is given of the measures taken in America, but it seems unfortunate that the author should have dealt first with

these and then come to the problem in Great Britain. Before the Declaration of War by the United States on 6th April, 1917, England had instituted her Ministry of Food, (22nd December, 1916), had gained considerable experience in food control, especially in the case of sugar, and had in the autumn of 1916 offered a guaranteed price for oats grown on land then in permanent pasture; and her Corn Production Bill followed the entry of the United States to the war by only a few months. As a stimulus to production much is made of both motives, patriotism and the higher price to be obtained for the product, and though the author leaves us in little doubt as to which of these was the deciding factor in America before her entry to the war, he explicitly states that after 1917 "how much is to be attributed to the one, and how much to the other is in most instances, past finding out". The shortage of farm labor in the two countries offers a striking contrast—in America 20,500 men out of 14,000,000, or 1.48 per cent, had been drafted before March, 1918, which, even if we make allowance for some who may have been attracted to industry by higher wages, is not much to complain of when English agriculture had lost 300,000 men by the summer of 1916.

A chapter worthy of study side by side with the policy of the Food Ministry in England is that dealing with Mr. Hoover's voluntary plan of conservation. We should like to have seen a little more on the results of food control in England. Of the American effort to "sit at the same table with the Allies and divide the loaf" it is said that "it is safe to assume that without the food administration we should have had more profiteers, and less food to send across the Atlantic".

Better in detail than in general conclusions, yet one of those useful compilations which bring together a large mass of information and make a splendid starting point for subsequent inquiry, is our general verdict upon this book.

W. H. MYLES

The Flow of Value, By LOGAN GRANT MCPHERSON. New York: the Century Co. 1919. pp. xi, 473.

The book under review is an attempt "to set forth in general outline the sequence of cause and effect in the determination of prices, wages, and profits." The author's

system of exposition is evolutionary, and he has attempted to build up a theory of value by passing through its successive stages all "suppositions". The method has its merits as it gives some idea of the probable line of evolution of the ratios of exchange of various commodities during different stages of economic development, and as it points out the evolutionary relationship between profits, wages, ratios of exchange and the growth of civilization. But in adopting this method the author has lost sight of the relative character of price, and does not give due prominence to the interaction of the marginal degree of utility of a commodity and its marginal cost of production. Again his habit of using technical terms in meanings other than those generally given by classical and recognised modern writers is distinctly unfortunate. Thus he uses the word "utility" to denote commodity, and "units of exchange" for standard of value. The term "final utility" has been used for finished commodity, and for utility itself the word "usefulness".

But in spite of these novelties the book may be instructive to those who have already got the main ideas of the science from standard works. The author's "man-hours" and "man-days", although perfectly undeterminable for want of an easily measurable standard, and hence of no practical significance from the immediate scientific point of view, have yet a value inasmuch as they draw our attention to those vital conceptions that underlie the laws of supply and demand.

**BALANCE OF THE GOLD STANDARD RESERVE IN INDIA AND IN
ENGLAND ON THE LAST DAY OF EACH MONTH**

Held in the following form	30th June 1920	31st July 1920	31st August 1920	30th September 1920
	£	£	£	£
1. Gold in India ...	...	...	...	...
2. Cash at the Bank of England ...	1,168	3,928	342	4,882
3. British Government securities (<i>valued as on 31st March 1920.</i>)	14,528,935	13,538,095	83,538,095	87,442,215 (<i>valued as on 30th Sept. 1920.</i>)
4. Securities since pur- chased ...	22,214,874	23,314,140	23,640,701	...
TOTAL ...	36,744,977	36,856,163	37,179,138	37,447,047

**BALANCES HELD IN CASH IN THE GOVERNMENT CIVIL TREASURIES
AND AT CREDIT OF GOVERNMENT IN THE PRESIDENCY BANKS AND
THEIR BRANCHES—BANK RATES—EXCHANGE—SILVER, ETC.**

	30th June 1920	31st July 1920	31st August 1920	30th Sept. 1920
	Rs. 1,000's	Rs. 1,000's	Rs. 1,000's	Rs. 1,000's
Treasury Balances ...	25,74,16	28,76,18	25,79,10	24,20,65
	30th June 1920	31st July 1920	31st August 1920	30th Sept. 1920
<i>Bank Rates</i> ...	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>
Bank of Bengal ...	6	5	5	5
Bombay ...	6	5	5	5
Madras ...	8	6	6	6
England ...	7	7	7	7
<i>Exchange Rates</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
On Demand ...	1 9 $\frac{1}{16}$	1 10 $\frac{1}{2}$	1 10 $\frac{1}{2}$	1 9 $\frac{1}{2}$
Telegraphic Transfer ...	1 9	1 10 $\frac{1}{2}$	1 10 $\frac{1}{2}$	1 9 $\frac{1}{2}$
3 Months' ...	1 10 $\frac{1}{2}$	1 11 $\frac{3}{4}$	1 11 $\frac{13}{16}$	1 10 $\frac{1}{2}$
6 Months' ...	1 10 $\frac{13}{16}$	...	1 11 $\frac{1}{2}$	1 10 $\frac{13}{16}$
Government paper (3 $\frac{1}{2}$ p.c.)	59 $\frac{1}{4}$	—	54 $\frac{1}{4}$	58
Bar Silver in London ...	52d	56 $\frac{1}{2}$ d	58 $\frac{3}{4}$ d	59 $\frac{1}{2}$ d

**BALANCE OF THE GOLD STANDARD RESERVE IN INDIA AND
IN ENGLAND ON THE LAST DAY OF EACH MONTH**

31st October 1920	30th November 1920	31st December 1920	31st January 1921	28th February 1921
£	£	£	£	£
...
2,247	217	1,564	4,734	1,985
26,189,373	18,610,477	14,230,543	14,230,543	14,230,543
11,548,697	19,225,212	23,677,456	23,870,025	24,054,693
37,740,317	37,835,906	37,909,563	38,105,302	38,257,221

**BALANCES HELD IN CASH IN THE GOVERNMENT CIVIL TREASURIES
AND AT CREDIT OF GOVERNMENT IN THE PRESIDENCY BANKS AND
THEIR BRANCHES—BANK RATES—EXCHANGE—SILVER, ETC.**

31st October 1920	30th November 1920	31st December 1920	31st January 1921	28th February 1921
Rs. 1,000's	Rs. 1,000's	Rs. 1,000's	Rs. 1,000's	Rs. 1,000's
18,95,94	13,29,40	15,15,48	13,43,67	11,99,15
31st Oct. 1920 per cent	30th Nov. 1920 per cent	31st Dec. 1920 per cent	31st Jan. 1921 per cent	28th Feb. 1921 per cent
5	7	7	Imperial Bank	
5	7	7		7
6	7	7		
7	7	7		7
s. d.	s. d.	s. d.	s. d.	s. d.
1 7	1 6 $\frac{5}{8}$	1 5 $\frac{3}{4}$	1 5 $\frac{1}{16}$	1 3 $\frac{9}{16}$
1 7 $\frac{3}{4}$	1 6 $\frac{1}{2}$	1 5 $\frac{1}{4}$	1 5	1 3 $\frac{1}{2}$
1 8 $\frac{1}{4}$	1 7 $\frac{3}{4}$	1 6 $\frac{1}{4}$	1 5 $\frac{3}{8}$	1 4 $\frac{1}{2}$
1 8 $\frac{13}{16}$	1 7 $\frac{15}{16}$	1 6 $\frac{11}{16}$	1 5 $\frac{15}{16}$	1 4 $\frac{11}{16}$
51	51	53	57	55
52 $\frac{1}{2}$ d	46 $\frac{1}{2}$ —44 $\frac{5}{8}$	40 $\frac{7}{8}$ d	35 $\frac{3}{4}$ d	39d

BALANCE OF THE GOLD STANDARD RESERVE IN INDIA AND
IN ENGLAND ON THE LAST DAY OF EACH MONTH

Held in the following form	31st March 1921	31st April 1921	30th May 1921	31st June 1921
	£	£	£	£
1. Gold in India ...	...	...	...	...
2. Cash and the Bank of England ...	4,883	4,397	3,315	3,658
3. British Government (valued on 30th March 1921)	38,951,416	31,104,159	24,634,190	14,598,956
4. Securities since purchased ...	...	8,132,981	14,672,443	24,852,743
Total ...	38,956,299	39,241,537	39,309,948	39,455,357

BALANCES HELD IN CASH IN THE GOVERNMENT CIVIL TREASURIES
AND AT CREDIT OF GOVERNMENT IN THE IMPERIAL BANK AND ITS
BRANCHES—BANK RATES—EXCHANGE—SILVER, ETC.

	31st March 1921	30th April 1921	31st May 1921	30th June 1921
	Rs. 1,000's	Rs. 1,000's	Rs. 1,000's	Rs. 1,000's
Treasury Balances	13,87,65	19,73,89	18,80,30	27,97,08
<i>Bank Rates—</i>	31st March 1921 per cent	30th April 1921 per cent	31st May 1921 per cent	30th June 1921 per cent
Imperial Bank of India	6	6	5	5
Bank of England ...	7	6	6	6
<i>Exchange Rates—</i>	s. d.	s. d.	s. d.	s. d.
On Demand ...	1 3 $\frac{3}{4}$	1 3 $\frac{11}{16}$	1 3 $\frac{9}{32}$	1 3 $\frac{1}{2}$
Telegraphic Transfers	1 3 $\frac{11}{16}$	1 3 $\frac{6}{16}$	1 3 $\frac{1}{4}$	1 3 $\frac{11}{32}$
3 Months' ...	1 4 $\frac{3}{16}$	1 4 $\frac{3}{16}$	1 3 $\frac{5}{8}$	1 3 $\frac{3}{4}$
6 Months' ...	1 4 $\frac{5}{8}$	1 4 $\frac{7}{16}$	1 4	1 4 $\frac{1}{2}$
Government paper (3 $\frac{1}{2}$ p.c.)	55 $\frac{1}{2}$	...	61 $\frac{3}{4}$	58 $\frac{1}{2}$
Bar Silver in London	33 $\frac{1}{2}$	34 $\frac{1}{2}$ d	33 $\frac{1}{2}$	35 $\frac{1}{2}$

BALANCE OF THE GOLD STANDARD RESERVE IN INDIA AND IN ENGLAND ON THE LAST DAY OF EACH MONTH

31st July 1921	30th August 1921	30th September 1921	31st October 1921	30th November 1921	31st December 1921
£	£	£	£	£	£
...	1	1	1	...	...
4,170	302	4,013	3,236	3,876	3,242
11,525,636	11,525,636	40,322,868 (valued as on 30th Sept. 1921)	30,528,903	25,406,137	19,520,157
27,968,177	28,103,531	...	9,662,357	14,816,393	20,770,183
39,492,983	39,629,470	40,326,882*	40,194,497*	40,226,406	40,293,582

* The excess over £40 million will be utilized for the reduction of created securities held in the Paper Currency Reserve.

BALANCES HELD IN CASH IN THE GOVERNMENT CIVIL TREASURIES AND AT CREDIT OF GOVERNMENT IN THE IMPERIAL BANK AND ITS BRANCHES—BANK RATES—EXCHANGE—SILVER, ETC.

31st July 1921	31st August 1921	30th Sept. 1921	31st October 1921	30th November 1921	31st December 1921
Rs. 1,000's	Rs. 1,000's	Rs. 1,000's	Rs. 1,000's	Rs. 1,000's	Rs. 1,000's
30,93,37	16,81,09	13,33,33	13,77,02	16,14,54	11,28,27
per cent	per cent	per cent	per cent	per cent	per cent
5	5	5	5	5	7
5½	5½	5½	5½	5	5
s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1 8 $\frac{18}{32}$	1 4 $\frac{19}{32}$	1 5 $\frac{15}{32}$	1 4 $\frac{16}{32}$	1 3 $\frac{29}{32}$	1 8 $\frac{31}{32}$
1 3 $\frac{3}{8}$	1 4 $\frac{9}{16}$	1 5 $\frac{7}{16}$	1 4 $\frac{7}{16}$	1 3 $\frac{1}{2}$	1 8 $\frac{15}{16}$
1 3 $\frac{1}{2}$	1 5	1 5 $\frac{1}{2}$	1 4 $\frac{1}{2}$	1 4 $\frac{1}{2}$	1 4 $\frac{5}{16}$
1 4 $\frac{1}{8}$	1 5 $\frac{1}{2}$	1 6 $\frac{1}{2}$	1 5 $\frac{1}{2}$	1 4 $\frac{1}{8}$	1 4 $\frac{7}{16}$
60½	59½	59½	59½	60	59½
38½	37½	42½	40½	37½	34½

ABSTRACT OF THE ACCOUNTS OF THE DEPARTMENT OF
ISSUE OF PAPER CURRENCY

(*Lakhs of Rupees*)

	30th June 1920	31st July 1920	31st August 1920	30th September 1920
Total amount of Notes in circulation	1,64,34	1,63,87	1,63,27	1,57,63
RESERVE				
Coin and Bullion ...				
<i>In India :—</i>				
Silver coin ...	41,94	46,75	51,62	54,34
Gold coin and Bullion	43,48	44,62	39,12	36,15
Silver under coinge...	3,61	3,61	3,67	3,72
<i>In England :—</i>				
Gold coin and Bullion	20	...	...	...
Bullion (in transit ... between India, Eng- land and H. M.'s dominions)	2,29	...	...	...
Securities (at purchase price) :—				
Held in India ...	35,55	40,62	47,33	47,14
Held in England ...	37,27	28,27	21,52	16,27
Total ...	1,64,34	1,63,87	1,63,27	157,63

ABSTRACT OF THE ACCOUNTS OF THE DEPARTMENT OF
 ISSUE OF PAPER CURRENCY
(Lakhs of Rupees)

31st October 1920	30th November 1920	31st December 1920	31st January 1921	28th February 1921.
1,59,58	1,60,21	1,61,40	1,63,41	1,64,60
55,60	56,05	57,13	58,95	60,03
23,75	23,86	23,89	24,00	24,06
3,81	3,88	3,96	4,04	4,09
...
...
68,07	68,07	68,07	68,07	68,07
8,35	8,35	8,35	8,35	8,35
1,59,58	1,60,21	1,61,40	1,63,41	1,64,60

ABSTRACT OF THE ACCOUNTS OF THE DEPARTMENT OF
ISSUE OF PAPER CURRENCY

(Lakhs of Rupees)

	31st March 1921	30th April 1921	31st May 1921	30th June 1921
Total amount of Notes in circulation.	1,66,16	1,67,32	1,67,81	1,71,76
RESERVE				
Coin and Bullion ...				
<i>In India :—</i>				
Silver Coin ...	61,42	62,45	62,96	66,86
Gold coin and Bullion	14,17	24,26	24,80	24,35
Silver under coinage	4,15	4,20	4,20	4,20
<i>In England :—</i>				
Gold coin and Bullion	...	...	...	...
Bullion (in transit between India Eng- land and H. M.'s dominions)	...	...	...	...
Securities (at purchase price) :—				
Held in India ...	68,07	68,06	67,99	67,99
Held in England ...	8,35	8,35	8,35	8,35
Total ...	1,66,16	1,67,32	1,67,81	1,71,76

ABSTRACT OF THE ACCOUNTS OF THE DEPARTMENT OF
ISSUE OF PAPER CURRENCY

(Lakhs of Rupees)

31st July 1921	31st August 1921	30th September 1921	31st October 1921	30th November 1921	31st December 1921
1,75,56	1,76,02	1,78,37	1,79,71	1,73,48	1,72,53
70,61	72,19	74,55	75,76	74,21	69,76
24,35	24,35	24,35	24,35	24,33	24,32
4,21	4,21	4,21	4,21	4,21	4,21
...
...
68,05	66,92	66,92	67,06	64,40	68,40
8,35	8,35	8,35	8,35	6,35	5,85
1,75,56	1,76,02	1,78,37	1,79,71	1,73,48	1,72,53

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- Federal Taxation of Income from the Production of Mine-
rals* by A. C. KELLEY.
Joint Cost in the Packing Industry. by G. E. PUTNAM.
Cost of Production and Price over Long and Short Periods,
by F. H. KNIGHT.
The Brass Check, A Study of American Journalism, by U.
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MAY, 1921

Papers Presented at the Meeting of the Association of Collegiate Schools of Business.

The Problem of Graduate Training in Personal Administration, by ORDAWAY TED.

Possibilities of a General-Survey Course in Finance, by H. G. MOULTAN.

Special Problems of Content and Presentation in Finance Instruction in Large Schools of Commerce, by C. W. GERSTENBERG.

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R. C. McCREA, W. R. GRAY.

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Proposed Reforms in the System of Food Distribution. I.
by W. C. CAMP.

The Quantity Theory Scrutinized, by H. BILGRAM.

DECEMBER, 1921

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THE AMERICAN ECONOMIC REVIEW

MARCH, 1921

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Communications :—

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Integration in Marketing, by L. D. H. WELD.

JUNE, 1921

Federal Reserve Policy, by A. C. MILLER.

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Criteria of Marketing Efficiency, by F. E. CLARK.

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The Industrial Situation in Great Britain from the Armistice to the Beginning of 1921.
by HERBERT FEIS.

Documents, Reports, and Legislation,—
Report on the Grain Trade, by F. L. YAUGHAN.

SEPTEMBER, 1921

The Movement of Real Wages, 1890-1918. by P. H. DOUGLAS,
and F. LAMBERSON.

- Recent Developments in the Federal Farm Loan System* by G. E. PUTNAM.
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- Family Budgets and Wages,* by M. L. STECKER.
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- Integration in Marketing,* by L. H. HANEY.
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- California Legislative Report on Public Utilities* by C. O. RUGGLES.
- Report of the Massachusetts Special Commission on the Necessaries of Life,* by P. H. DOUGLAS.
- Report of the Committee on Rural Credits,* by A. E. CANCE.

DECEMBER, 1921

- Failure of the Merchant Marine Act of 1920.* by E. S. CREGG.
- Cycles of Strikes,* by A. H. HANSEN.
- The Cost of Living as a Factor in Wage Adjustment in the Book and Job Branch of the Chicago Printing Industry,* by F. H. BIRD.
- Economic Basis for Business Regulation,* by R. G. TUGWELL.
- Communication,—*
- Wages, Budgets, Cost of Living,* by V. ROSEWATER.
- Report of the United States Tariff Commission on the Wool-Growing Industry,* by A. BERGLUD.

SUPPLEMENTS TO DECEMBER NUMBER

- No. 1 Papers and Proceedings at the Thirty-third Annual Meeting. The Railroad Situation; Our Foreign Trade Balance; Bituminous Coal Industry; Traditional Economic Theory; Non-Euclidean Economics; Federal Taxation of Profits and Income; Teaching of Elementary Economics.
- No. 2 *What can a Man Afford?* By P. and D. Douglas and C. S. Joslyn. [A detailed and important study in consumption.]

QUARTERLY JOURNAL OF ECONOMICS
(CAMBRIDGE, MASS)

FEBRUARY, 1921

The Economic and Financial Position of France in 1920
by G. JEZE.

Generating Cycles of Product and Prices, by H. L. MOORE.

Index Number of the Total Cost of Living, by G. E. BARNETT.

A Statistical Analysis of the Relation between Cost and Price, by K. SIMPSON.

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MAY, 1921

Should the Excess Profits Tax be Repealed? by T. S. ADAMS.

Is Market Price Determinate? by F. W. TAUSSIG.

The Meat-Packing Investigation, by L. D. H. WELD.

The Fabian Socialist Commonwealth, by A. N. HOLCOMBE.

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AUGUST, 1921

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JANUARY, 1922

The progress of British agriculture. The Presidential Address of Sir R. Henry Rew, K.C.B., for the Session 1921-22.

The statistics of industrial morbidity in Great Britain, by EDWARD A. RUSHER, F.I.A.

On the interpretation of x^2 from contingency tables, and the calculation of P. by R. A. FISHER, M.A.

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Note on an account of the number of people in Scotland in the year 1755, by ALEXANDER WEBSTER.

MARCH, 1922

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H. W. LYONS.
The Rural Life of Chotanagpur. P. C. BOSE.

Finance of Economic Development. H. STANLEY. JEVONS.
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<i>in the United Provinces</i> , by Prof. H. S. JEVONS, | Price Re. 1. |
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INDIAN
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Vol. III—Part 4

PAPERS READ AT THE
FOURTH ANNUAL CONFERENCE
OF THE
INDIAN ECONOMIC ASSOCIATION
AT ALLAHABAD

*December 29th, 30th and 31st, 1920,
and January 1st, 1921*

*First Day—Wednesday, December 29th, 1920
Morning—*

ADDRESS OF WELCOME

The chair was taken at 11 a.m. by Mr. H. STANLEY JEVONS, Honorary Local Secretary of the Association, who delivered an Address of Welcome on behalf of the Reception Committee, in the course of which he said :—

It is my privilege to open this conference on behalf of the Reception Committee by extending a hearty welcome to the members who are visiting Allahabad. This Association is now holding its Fourth Annual Conference. The first Conference was held in Calcutta, the second in Bombay, the third in Madras. For the first time you are visiting another than a Presidency town; for the first time you visit the North of India and find around you the great Gangetic plain with its swarming population. Hitherto the environment of these Conferences has been mainly commercial and industrial—here it is rural with the cultural elements

of a town which is the capital of a Province whose predominant interest is the land, whose foremost industry is agriculture. If Allahabad has neither the bustling life of commerce, nor the hum of industry, it yet has many claims to rank as a city of importance. Known originally as Prayag it has a history fading into the dim and distant part; but always it was a place of note—the meeting point of two great rivers, a centre of pilgrimage, and a focus of waterborne trade.

Allahabad is still the greatest centre of pilgrimage in India, it is a seat of Government and of Justice, and it is a considerable educational centre. It has three Arts Colleges affiliated to the University, a Training College, and numerous High Schools for boys and girls. It is an important railway centre, and last but not least it is a centre of politics and journalism, its four daily papers representing all shades of opinion.

It is in no boastful vein that I have given you this sketch of the city in which you find yourselves; but rather with the idea that it may add to the interest of your visit to know something of the place in which the Conference meets. We economists are sometimes blamed because we discuss things so much in the abstract. One of the papers which we shall hear on the last day of this Conference calls attention to the desirability of economists paying more attention to a study of their surroundings—of the local geography; and this is a view which I thoroughly endorse.

It is unlucky that the time fixed twelve months ago for this Conference happens to clash with the meeting of the Congress and of several other conferences. Many members who had expressed their intention of attending have at the last moment gone elsewhere. But if this Conference is not so large in numbers as we might have wished, I may have the satisfaction, as Honorary Treasurer, of telling you that this Association grows con-

tinually in membership and financial strength. It serves a useful purpose, and will more and more become the rallying point of all economists in this wide country.

Gentlemen, we meet not only to hear and discuss papers on various subjects. We have the annual business meeting, in which we have the important task of taking thought for the future of this Association and how to build it up in usefulness and strength. We have in our charge, if we like to assume the burden, a great responsibility for the future progress of our science in India.

It is with these thoughts prevailing that, in the name of the Reception Committee, I give you a hearty welcome to Allahabad. Dr. Gilbert Slater, who was the Honorary Local Secretary of the last conference, and is Chairman of the Committee, will be the President of this Conference, and I have now great pleasure in calling upon him to take the Chair.

Dr. GILBERT SLATER then took the Chair, and said:—
GENTLEMEN—There cannot fail to be uppermost in our minds in assembling here the sad news of the death of our late Chairman, Mr. Percy Anstey, and I am sure it will be in accordance with the feeling of members present that we should not proceed with the business of this Conference until we have adopted a resolution in appreciation of his services and of condolence with Mrs. Anstey. I therefore move from the Chair:—

“That this Conference of the Indian economic Association desires to express its profound regret at the untimely death of Principal Percy Anstey. It recognises the importance of the services which the late Professor Anstey rendered to Economic Science in India, and particularly his zealous exertions as an officer of this Association. His numerous public activities as a citizen of Bombay have been much appreciated and his loss will be severely felt. This Conference offers its sympathy

and condolence to Mrs. Anstey in her bereavement."

To you who are present I need say nothing of the services Mr. Anstey rendered to Indian Economics generally and to our Association in particular. Others can speak with more authority than I can with regard to his work in Bombay. But I feel in private duty bound to add that we in Madras owe him a special debt of gratitude for the generous interest he took in the development of the study and teaching of economics in our University, and for his most helpful encouragement and advice, which I believe will bear fruit in the future.

Mr. DEOLE said—I am very sorry that we have to perform such a mournful duty just at the beginning of the session. I come from Bombay and I will be able to give you some personal touches regarding my acquaintance with Principal Anstey and his work. When I first saw the notice in the Times of India it was announced that a Mr. Anstey had died. I could not believe that it was our Mr. Anstey. I read further and was convinced that he was dead. He was in the prime of life. He had a hard task as Principal of the Sydenham College. It was the first college of its kind in India, and you will believe me when I tell you that the success of the College, whatever it is, is due chiefly to Principal Anstey. He was not only an economist, but he tried to bring in all the business elements that were available in Bombay. He made the College a success even from the business point of view. Not only that: he was so popular with his pupils—that is a great point—that they deeply mourn his loss. He was very anxious to give his students as much liberty as possible; to give them the opportunity to grow. I may tell you one instance which will give you an exact idea as to how liberal he was with his pupils. You know that the death of Bal Gangadhar Tilak had

stirred the whole student community of Bombay. The students wanted to observe a holiday and approached him with this request. He said he was sorry as he was a servant of the Government of India he had to work under their orders. Hence he could not give formal leave. If the students wanted to observe the day as a holiday and stayed away from class he would take no objection. The resolution says he was also very useful as a citizen of Bombay. He was a member of the Bombay Corporation, and there was a meeting held in Bombay to erect a memorial to Mr. Anstey. Speaker after speaker rose and gave testimony to the work that he did. Another instance. There was a strike of the sweepers of Bombay. A small committee consisting of Mr. Anstey was appointed. His suggestions were very useful, and satisfactory. not only to the Corporation but also to the sweepers, and they were all pleased. The strike came to an end. Gentlemen, this is not the time to make a speech. I second this resolution and commend it for your acceptance."

Prof. COYAJEE said—I beg to support this resolution. The late Mr. Anstey single-handed succeeded in building up the Sydenham College of Commerce and Economics in Bombay. As you have heard from Mr. Deole and Dr. Slater, he was pre-eminently a man of affairs. By the death of Principal Anstey the cause of economics and commercial studies in India has suffered an irreparable loss. His activities in the promotion of the interests of the Association and in the co-ordination of economic studies in India are well known. In particular, he was the foremost exponent of economics in Western India; and his activities did not end there. The whole of India felt the benefit of his guiding influence in the matter of the progress of commercial studies, while he made the Sydenham College the model and

exemplar of commercial institutes throughout India. In all these matters he has deserved well of this country.

The Resolution was adopted unanimously all standing.

PRESIDENTIAL ADDRESS

Dr. Gilbert Slater, in his opening address said :— I desire to emphasize the fact that this is a meeting of students of economic science. I have always felt qualms when reminded that my official position was that of a professor of economics. In comparatively easy subjects like mathematics or physics, in which mankind early made great progress, it is possible for a man perhaps, after twenty years' study, to become so proficient as to be rightly called a professor; but after a lifetime spent in the study of economics I feel myself to be only a beginner, and I believe my colleagues here have the same feeling.

Another peculiarity of economic science is that it is not professed economists only who study economics. Every business man, every administrator of state affairs, even every housewife, must, willy-nilly, consciously or unconsciously, be a student of economics. What distinguishes the economist is that he studies this subject of universal import consciously, and of set choice, and not by compulsion—with a view to the general public welfare and not that of a business or a section of the community. And however difficult and complicated economics may be, yet prolonged study has its value, and, conversely, neglect of economic science carries its penalties.

The past year has given, in the handling of the currency problem by the Government of India, a striking example of the unwisdom of neglecting economic science. In few subjects are its conclusions so definite and certain as in matters relating to exchange

and currency. One of its conclusions as applied to Indian currency is that a high exchange value for the rupee is all right, if it is permanent and invariable, and also a low exchange value is all right if it does not vary. For exchange value of money, so far as the country as a whole is concerned, is mainly of importance as affecting foreign trade, *i.e.*, exports and imports. India exports goods partly to pay for imports. The advantages of the bargain depend on the ratio between prices and costs of production of India's exportable goods as compared with the goods India desires to import. Rupees are changed into English money and that back again into rupees, in those cases where exports and imports do not directly pay for one another; and the rate of currency exchange, if unchanged throughout the cycle of transaction, has no effect on the profitableness of the bargain. India also exports goods to settle current international indebtedness, and the quantity of goods that must be exported depends, not on exchange, but on the sterling prices of Indian products in the world market. But what is most injurious to India is violent fluctuations in exchange. These convert both import and export into gambling transactions, and penalize both the producer and consumer. Therefore the policy of Government should be to diminish fluctuations to the utmost of its power. Actually it started selling Reverse Councils, which means buying rupees, still further to enhance their sterling price when that was unprecedentedly high, and stopped this when the price was low. It aggravated the evil of fluctuation when it should have abated it. Reverse Councils should never have been sold till the rupee dropped below 2s.

But if excuses be found for this mistaken action, surely no excuse can be made for buying rupees at a fancy price, some ten per cent on the average, above

the market price. If £50,000,000 was spent, as has been announced, in this manner, then £5,000,000 of the taxpayers money was simply thrown away, ultimately getting, for the most part, into very capacious pockets. If only those responsible had spared a half anna stamp and asked the opinion of the Committee of this Association that money might have been saved.

Is the Indian Government, since it must have seen for itself how disastrous has been its handling of exchange, not ready to listen to advice? If so, I would beg it to try to understand the principles upon which the successful system of the pre-war period was based. One feature of that system was that when the rupee rose beyond a certain sterling value English money came in to pay for Indian exports, and when it fell below a certain value the English money could be sent back to England. True, English money then was gold, and now is paper; yet its efficiency depended in the main on the fact that it was English money, rather than on the fact that it was metal. In September, 1919, I urged that this feature in the currency system should be restored by making English Treasury notes legal tender in India. All our experience since has tended on the one hand to enhance my estimate of the benefit that this would confer in stabilizing exchange, and on the other to show that all the difficulties which I myself apprehended, or which were alleged by other people, were merely temporary where not illusory. Had this step been taken when I proposed it, the rupee being then 1s. 10d., and the English £1 note made legal tender in India at Rs. 10, the rupee would have risen but very slightly above 2s, and then the English money would have flowed in to pay for the balance of exports of the ensuing six months, then when the tide turned that money would have gone back again to pay for the

balance of imports, stopping the fall in exchange as soon as the rupee dropped appreciably below 2s.

But it is not the Indian Government alone that is guilty of unwisdom in slighting the teachings of economic science. We find the same neglect among other governments, and among unofficial leaders of public opinion all over the world. Should not this fact make us search our hearts, and ask ourselves whether we are not partly to blame? Do we pronounce our fundamental principles with sufficient clearness and vigor and determination to be heard?

Does not India and the whole world need now to have the truth impressed upon it which is the basis of our study, the truth that adequate production, just distribution, and wise consumption or utilization of necessary and desirable commodities is a fundamental and common interest of all humanity? Are we doing all that we might in making the world realise that the efforts of statesmen and philosophers and poets and religious leaders are thrown away if either the production of necessities fails, or what is produced fails to reach those who need it?

Again, are we sufficiently clear and lucid in our exposition of the necessary factors of production? True "land, labor and capital" are necessary factors, but to repeat this is apt to make India forget, what India ought to realise, that knowledge, skill, intelligence, determination, initiative and conscientiousness are also necessary factors. And not only India, but the world outside has been forgetting with deadly results, that mutual aid and cooperation is the most necessary factor of all. Ruskin was wrong in saying that competition was the law of death, for competition as well as cooperation is a necessary factor in human life, but he was emphatically right in declaring that cooperation is the law of life; and speaking as an

economist and not as politician, I would add that *non-cooperation is the law of death.*

War is the extreme form of non-cooperation, and its terrors are fresh in our minds. But peace, to bring healing, must be not only a cessation of hostilities, it must be active, an energetic promotion of mutual help and cooperation between nations. All the nations in the world must live together on this little sphere, which practically is continually contracting as the obstacles to transit are overcome. Mankind can live in prosperity and happiness by mutual aid and cooperation, or it can destroy itself by mere refusal to cooperate. I find in India a wide-spread idea that Europe is cursed by the narrow nationalism which ignores the wider duty to humanity and the economic fact of the interdependence of peoples and countries, but that India stands on a higher moral plane. But in my contact with students I do not find this idea confirmed. I find that the Indian student habitually insists on looking at questions from an exclusively Indian standpoint, and I consider that a warning against national selfishness is necessary in Asia as well as in Europe.

India is on the threshold of its independent career. It may enter upon that career in the Prussian spirit of narrow nationalism, thinking only of its own interests; but if Indian future history is to be honorable to India, Indians must seek, not the good of India only, but that of all humanity.

THE IDEAL SYSTEM OF LAND TENURE

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I. Introduction

The unit of human sympathy has always been commensurate with the stage of economic development reached at any time in a country: During the days of Tribal Economy, when each tribe wandered from place to place, taking catch crops now here and now there, the unit of human sympathy was the tribe, and when these tribes settled themselves in fixed habitations called villages, which were at once isolated and self-sufficing, the unit was extended to and confined within the area of the village; when these villages for one reason or another expanded into towns and cities, the same expansion and limitation of the unit was met with. Then the development of the means of communication within various countries, and outside, first tended to create a National and then an International stage of Economic Development, and with these running concurrently were the waves of Nationalism and Internationalism. Before the great war the growing tendency was towards Internationalism or what has been sometimes called Cosmopolitanism; but the severe shock of that huge armageddon rudely pushed

back this rising wave, leaving an open sea to the other. The wave that now surges in the hearts of men is that of nationalism, and all the countries of the world are hammering out schemes to attain the highest possible national development. Any method of reform, therefore, which one may suggest in any walk of life, is to be subjected to the supreme test of nationalism—a term which to my mind connotes that the interests of the nation as a whole are to be given the priority over international, as well as individual or communal interests: A scheme of reform that may be capable of securing a very high degree of development in a particular branch of national activity, or that may be supremely advantageous to a particular community, if it is not calculated to have a beneficial effect on the all-round activity of the nation, is to be rejected, and another capable of securing a higher national advantage, although its influence on a particular branch of activity may not be as beneficial as of the former, is to be adopted. To put it in a nut-shell, the doctrine of nationalism would subordinate the interests of an individual unit of society or of an individual industry, to the interests of the nation as a whole. A line of reform advocated, therefore, is not to be judged on its own merits alone, but its reflex influences on other branches of national activity are also to be taken into account.

II. General Considerations

(1) The first consideration, therefore, to be constantly kept in mind while devising any system of land-tenure would be to make it such as may ensure on the one hand, the fullest possible development of the agricultural resources, and on the other help the manufacturing and commercial activities of a country.

In any case it should not in any way act as a drag upon the other activities of the society.

(2) Then again it has been found by experience that when the interests of more than one class of people clash together in any industry, as they certainly do in agriculture, then that industry suffers by mutual unnecessary interference. And, side by side with the above it has been noticed that generally this joint demand for the services of two or three classes of people leaves one class dependent upon another, with the result that the prosperity of the former depends upon the latter. This is very pernicious, and in devising a new system we should try to eliminate this dependence as far as possible. It should ensure to each class of people as much freedom of action as may be compatible with the highest national interests. Each class should be secured in its rights; and the obligations of each towards the other, and of all towards the industry should be well-defined.

(3) Last of all there should be no compulsion upon any man to follow this or that industry. He should be perfectly free to follow that work in life to which his natural interests lead him, as a man is sure to do that best for which he has been made by Nature.

III. Essentials of the Ideal Cultivator's Tenure.

(1) Continuity of Possession

In order to secure the highest possible development of agriculture it is essential to provide some sort of continuity of possession. It is not essential that the man who tills the ground should be made the owner of it, in the sense in which the word owner is generally used. (It carries with it the idea of the power of sale, mortgage, lease, inheritance, etc). But it may be taken as an axiom that the longer and more certain the

continuity of possession the greater would be the expenditure of capital and effort that a cultivator would be disposed to put on his farm.

(2) *External adjustment of rents*

Continuity of possession necessarily involves some external regulation of rents, for if the land-lord could raise the rents at any time and to any amount he thought fit, he would, when competition is active, drive out the cultivator by fixing the rent impossibly high. The two conceptions are as a matter of fact interdependent, and any administration which undertakes to secure continuity of possession, should also undertake the regulation of rents.

(3) *Freedom of adjusting scale to the resources*

If the principle No. 1 were to be carried to its logical conclusion, it would lead to the confirmation of the right of property in perpetuity, and the researches of Arthur Young, Seebohm, and others in the systems of land-tenures of various countries, and the prevailing state of agriculture there also point in the same direction. But the rigor of this is to be modified by an equally important principle: every cultivator should be free to give up or to take in as much land as his resources in men and money may warrant at a particular time. The import of this principle is that although the cultivator may be free to adjust his scale of industry to his resources, he should be made independent of any outside pressure to adopt a different scale. This would necessitate some such legal provision as is met with in the *ryotwari* systems of India, which provide that so long as an "occupant" pays the land revenue, assessed on his land every thirty years, he may without fear of any ejectment continue to cultivate his land, but may whenever he so desires, give up a part or the

whole of his land, the amount of revenue being decreased proportionately. Or we may adopt some such system of periodical readjustments of the size of individual holdings, as was prevalent in Russia during the days of *mir* tenure. Whatever system we adopt, there should be some provision to meet the necessity of a farmer. If at any time a cultivator finds his resources to have increased, and if he is desirous of taking up more land he should have every facility to do so provided such addition is not liable to affect prejudicially his fellow cultivators. And the chief items to be taken into account while estimating the resources should be the number of persons to work upon, and to get subsistence from the land, and the amount as well as the nature of the capital to be used.

(4) *Contiguous system of fields*

The disadvantages of a holding composed of fields scattered here and there, have been fully realised in thinking circles, and much has been written on the subject of late; it is enough therefore for me to refer to it and say that the new system of land tenures should provide the right of cultivation in a solid block of land only, and should never allow cultivation of scattered fields.

(5) *Inheritable, but only by one heir*

The holding of the farmer should be inheritable, but only by one of his sons or daughters, whoever has natural aptitude for agriculture. It should never be left to be divided amongst all the sons, as is now done under the wasteful Hindu and Mohammedan laws of inheritance. The evils resulting from these laws have been so fully discussed and set out in the recent literature on the subject, that I need not dilate upon them here. Not only the land, but all the agricultural capital also, should devolve upon him who

inherits the land, and the rest of the property may be equally divided amongst the others. Although the land should be heritable under the restricted conditions named above it should never be capable of being mortgaged or sold in parts. It may be transferable, but only in lots, and only to him who means to cultivate it himself, and not to sub-let it.

(6) *Improvements made by the cultivator exempted from enhancement of rent*

While discussing continuity of possession, we remember to have remarked that as an adjunct to it, we should have external regulation of rents. These changes in rent should only be allowed, in general, at the time of re-adjustments, or new settlements, and while assessing at new rents the improvements made by the cultivator on his land should be exempted, and the rents once enhanced should not be allowed to be raised again until a certain fixed period has passed away.

Re-adjustments as well as alteration in rents in particular cases and on special grounds should be permissible even during the time intervening between two readjustments, provided such readjustment is possible without inconveniencing others, and provided the changes in rent are justified on very special grounds such as the deterioration of land owing to some natural calamity, or improvement in land owing to some capital improvements made by the proprietor of the land. Who should be responsible for this, and how this is to be effected would be discussed later on.

IV.—*Is the maintenance of an intermediary proprietary interest desirable?*

We now pass on to discuss whether or no it would be desirable to introduce and maintain a proprietary interest between the actual cultivator and the Govern-

ment. Let us first start with the assumption that there is no intermediary, and then see what other measures besides the tenure detailed above, would have to be undertaken to insure the full development of the agricultural industry. The fixity of tenure and consolidated economic holdings would not by themselves bring about all that is desirable, although they would facilitate it, as now their absence blocks the way of progress. But all these would go a very little way indeed if the cultivator were left uneducated in the advanced methods of agriculture, and ignorant of the advantage of using specialised machines, as they are invented every now and then, of improved seeds and various agricultural products of better quality capable of being grown in a particular locality. And all this educative effect would result in nothing, if the cultivator did not possess the capital necessary to make these improvements. To begin with, therefore, the Government will have to provide some agency for the diffusion of sound education, and to control and guide it. Another to spread knowledge about improved seeds, agricultural machinery, and other discoveries as they are made in the Central Government Experimental Farms. For this, if it is to be done properly, demonstration farms will have to be opened for each contiguous group of four or five villages. Experimental farms, with provision for demonstration will have to be provided at convenient centres for each group of villages constituting a homogeneous region. And it may be found necessary to have still bigger experimental farms, say for a district or a group of districts, or a province, the size of the area of influence being determined by the nature of the climatic and other agrarian conditions, such as the quality of the soil, etc.

Then again the individual farm will need to be provided with various other capital improvements, such

as drainage and irrigation works, which are beyond the means of an individual farmer, however prosperous he may be. Even in a rich country like England, farm buildings, enclosures, and other big works are made by the landlords and therefore the Government will have to do these things here. The reason why even prosperous farmers fail to make these, is not far to seek. When property breaks into small pieces—as it is bound to do when we have peasant proprietors—the savings also break up, and are easily squandered; but when they gather together in a respectable mass in the hands of a landlord, they are not so easily wasted.

Another function which the Government will have to undertake in the absence of an enterprising intermediary as they have been compelled to do now, would be that of organising co-operative activity. Had the intermediary been conscientious and enthusiastic about his business there would have been no necessity for the Government to take initiative in the movement, and it would have been saved its present rigidity of form and a departmental character. It is an open secret that people in the villages look upon their co-operative credit societies as an institution of the State, maintained to provide cheap money for them. The general attitude of the Government Inspectors and others lends a strong support to their belief. They have not yet learnt to look upon the Society as their own, and this is the weakest possible point of the system.

To secure all the above desirable things, Government will have to maintain at least three different and independent agencies, one to spread education, supervise and control it, and it may be found convenient to entrust to this the diffusion of ideas about sanitation, co-operation and improved agriculture. Second, to organise, guide and control co-operation in its various forms and in practical life. And the third,

to work the experimental and demonstration farms. To *this* may be entrusted the planning and carrying out (assisted in bigger projects by the P. W. D.) of capital improvements, like drains and canals, as well as farm buildings.

Now, for all these three agencies, we shall have need of a very large staff of officials, which would be very expensive, and at the same time not as keen about its business as a conscientious and enthusiastic intermediary with a proprietary interest is likely to be. For this reason, and for others to follow, I consider it desirable to have an intermediary. Here somebody may pertinently remark that so far these intermediaries have, by no means, shown any marked enterprize, in providing education—general and agricultural—and have taken no interest whatever in the development of agriculture or co-operation. Of course, they have not. But that has been due to the prevailing ignorance of the class, and the resultant absence of *the sense* of duty, as well as to certain serious defects in his tenure. The enlightened landlord has done much for his tenantry in England, and we have every reason to believe that, if his ignorance is removed, and he is given a secure and reasonable tenure, the Indian landlord would also do equally as well for his tenants.

Besides being less expensive, an intermediary would be more efficient, as there would be no division of responsibility and he would take a personal interest in all this work. No Government official, however, well-paid and conscientious he may be, can equal the zeal of a zamindar who looks upon the land as his own. All these considerations impel me to say that the maintenance of the zamindar, wherever he is present and his introduction, wherever he is not present, is highly desirable.

*V.—Essentials of the Tenure of the Intermediary**(1) Proprietary interest to extend over a contiguous group of villages*

He should have a proprietary interest extending over an economic unit of a group of villages. Just as it is desirable to entrust to one farmer a consolidated block of land for good farming, so it is equally desirable to put in charge of an individual zemindar a group of contiguous villages with an area neither too large nor too small to be managed by him. Generally a zemindar who has a large number of villages under him has enough and to spare, and the marginal utility of money is low to him. If he is not given to the common vices of the rich, he cares very little for getting more by developing his estate, and the nation loses what would have come to it in the form of increased revenue if the zemindar had a strong incentive for getting more. If the zemindar happens to be a man of extravagant habits then to him his chief function is to get more and more rent out of the cultivators, and to eat, drink and be merry. Even if a big zemindar be enlightened, conscientious, and sympathetic, he cannot look after the affairs of his property, and has perforce to employ agents, who cheat him and cheat his tenants. The sufferings of the tenant under the personal care of a bad zemindar, are not comparable to the sufferings of those put under the best agents. My experience of estates managed by agents leads me to say that they almost always tyrannise over the cultivators, and care more for their personal gain than either for the development of the property or the well-being of the tenants. And if the different villages of a zemindar happen to be scattered in different tahsils of a district, or in different districts, then even the remote chance of a zemindar exercising some control is out

of question, and all the evils of management by agents are intensified very much. He who wants to have a first hand knowledge of these evils, should go to one of the taluqdari estates of Oudh, or to a big zemindari estate in the Agra Province, and see for himself the state of affairs there.

(2) *Inheritable according to Primogeniture*

The zemindari interest should be inheritable, but always according to the law of primogeniture. Only one son having aptitude for agriculture, and having previously received the education prescribed above, should succeed the father, others being left to do whatever they please, after due provision has been made for their education in what they are fit for. Besides the land and the agricultural capital which is to go to only one issue, all other property, should devolve equally upon others, according to the prevailing laws of the caste or tribe to which they belong.

The zemindari may be transferable and mortgageable but never leaseable. It should never be allowed to be sold in parts.

(3) *Powers of the Zemindar*

The zemindar may have certain powers over his tenantry, but never amounting to absolutism. He may, if he makes some capital improvement, enhance the rent, provided it is mutually agreed to. If no mutual agreement is reached, the matter may be referred to some authority considered competent for the task. But to attain this there should be no expensive procedure, no stamp duties, as they needlessly add to the expenses of the poor. Besides the enhancement of rent in case of mutual agreement, the zemindar may be entrusted with certain other magisterial and judicial powers, up to a certain limit.

While discussing the tenure of the cultivator, we remember to have remarked that as a general rule changes in rent should be allowed only at the time of periodic re-adjustments or new settlements, and that for special reasons detailed there they may be allowed in between two readjustments. Now these re-adjustments and changes in rent should be made by the zemindar, assisted by the village patwari, and in collaboration with the circle kanungo. After this the new scheme of re-adjustments should be submitted to the tahsildars for ratification. The tahsildar, before ratifying it should take measures to acquaint the farmers concerned with the changes proposed in it, and should within fifteen days of this decide any objections to it, and then finally declare it sanctioned, after modifications have been made. The length of the period after which these re-adjustments should be made, should correspond more or less to an agricultural cycle, the approximate length of which is between twelve and fourteen years. Three or four times of this may be fixed as the period for settlement of land revenue, but here the Government should definitely fix a percentage of the assets that it is entitled to. There should be no uncertainty about it, and no long procedures in arriving at the new figures of revenue demand for the future period.

(4)—Responsibilities of the Zemindar

He should be responsible, on the one hand to the Government for payment of land revenue assessed on his land from time to time, and on the other hand to the tenantry for the maintenance of an agricultural farm, the supervision of schools, and co-operative societies in the area under him. He should be responsible for making capital improvements on individual farms, for providing roads and

bridges, constructing wells and canals, dams and drains wherever necessary. He should look after the police, the panchayat, sanitation and hygiene of the various villages put under him. In short, he should be a constant source of inspiration and guidance to the cultivators under him.

(5) *Compulsory education for succession*

But to ensure that the intermediary would be enlightened, conscientious and really effective it is very essential to make it a legal necessity for him to get a thorough education in the science and art of agriculture, in estate management, as well as in other kindred branches of knowledge, such as co-operation and village sanitation, before he is allowed to assume charge of his office. To attain this there should be agricultural colleges, not as at present one in a province, but scattered throughout the country districts at convenient centres, where prospective zemindars may be educated, and the curriculum should be so arranged as to prepare them for their future work.

VI.—*Conclusion with special reference to the General Considerations*

The scheme of land tenures discussed above would in the opinion of the writer, not only provide facilities for the fullest possible development of the agricultural resources of a country, but would also create a middle class substantially rich both in material belongings and intellectual attainments amongst the sons and daughters of the zemindars. This middle class would be capable of giving very great help to the State at the time of emergency, and would be a perpetual source of culture and advancement to the country. Men of this class will have enough to live in comfort and to spare, and they will be able to pursue

knowledge for its own sake. Even if education be freely provided by the State, it is only those who have got sufficient monetary resources to buy books and papers, and to live up to that standard of living, which makes the pursuit of knowledge possible. It is people of this class alone who can add any thing original to the world's store of knowledge. That leisure is essential for high achievements in sciences and arts, is difficult to deny, and is well supported by the high development of both in Bengal, and that leisure would not be possible for the sons of even prosperous farmers is as difficult to refute. Therefore for the creation of a leisured, I don't say a luxurious, class, we have to look to the zemindari interests or to high commercialists and industrialists of a country. That freedom from monetary anxieties is very essential for the production of original work is very clearly supported by the fact that so far, leaving Bengal and the city of Bombay aside, very few Indians have succeeded in producing anything original, or in even becoming great politicians. I for one do not believe that the Indian has not got in him the requisite gifts of originality, of initiative and of invention; and the reasons why so few are met with are to be found in our defective system of education, and in the host of anxieties that begin to weigh a man down before he has passed his teens. Given a leisured class, with proper safeguards to ensure its *énèrgies* being directed into the right channels, we shall have not only a cheap central and very efficient agency to look after agriculture and other village activities, but also a permanent flow of well-trained and well brought up young men and women ready to take their part in other avocations of life that require a high standard of intelligence, and offer a high standard of living.

THE TAX SYSTEM UNDER THE REFORMS

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There are two general problems connected with the tax system: firstly, the distribution of taxation; secondly, the division of the taxing powers and revenues between the central and local governments.

In distributing the burden of taxation, the aim of the statesman, once he has decided how much revenue he needs, is to make the burden of that revenue as light as possible, by reaching those sources of taxation which can best bear the burden, and by taxing them in proportion to their ability to pay. In practice this requires us to answer the following questions:—

1. What taxes shall be levied? Shall there be a few heavy taxes with the impossibility of making accurate adjustments, or shall there be many light ones, with all the complexity and high cost of collection, which such a system causes? If only property is taxed incomes which result not from property but from skill, as well as many unexpected and unusual incomes, such as excess profits, will be untaxed. If only incomes are taxed, idle property which is kept out of use for pleasure or speculation, will bear no burden. Political motives must also be considered. Direct taxes are more resented, but indirect taxes

are likely to injure the poor, unless they are exclusively on luxuries. If we use all kinds of taxes there is great danger of double taxation.

2. Shall the taxes be proportional or progressive? Who shall be exempted? If graduated taxes are adopted, how rapidly and up to what point shall the tax-rate increase? There are arguments on both sides; but progressive taxes are rapidly being adopted in all countries, as the best way of making the burden proportional to the ability to pay.

The Indian tax system obeys these principles fairly well on the whole. Nearly equal amounts of the revenue are obtained from direct and indirect taxation. Though some of the indirect taxes are shifted to the poor, yet, as they usually pay no income tax, this does not produce double taxation. The land revenue and the income tax taken together are equivalent to a general income tax. But we find practically no attempt to tax speculative profits or unearned increments; and non-agricultural incomes are taxed on the latest principle of progression and super-tax, the lowest being exempt and the rate for the highest gradually approaching 25 per cent, while agricultural incomes are supposed to be taxed proportionally, but, owing to the unequal rise in land values and the long periods of settlement, the rate varies inconsistently from 5 to 55 per cent and probably even higher in some permanently settled areas.

In considering the recent reforms in India, the second problem of the tax system is much more important: namely, the division of the taxing powers and revenues between the central and local governments, in such a way that each government may freely increase its revenues without encroaching on the revenues of others, or hindering its own economic development. Here the difficulty of double taxation arises in two ways: either the same source

may be taxed by Imperial, provincial, and municipal governments, or it may be taxed in two provinces, if the owner resides in one and owns property in another. Double taxation could be prevented by having a uniform central tax system and doling out shares of each tax to local governments as was done formerly in India. But unless the people of provinces and even smaller territories are given a chance to tax themselves, they do not develop any sense of public responsibility, and many beneficial expenditures are not undertaken, for lack of money which people would vote, if assured that it would be used in their own city or district. If, however, to arouse public responsibility, complete independence is given, some backward localities will not vote necessary taxation, while others may injure themselves by voting large oppressive taxes in ignorance of their effects. A middle course is to determine which taxes local governments may levy, and in the case of smaller local governments, to fix maximum rates, for these taxes and possibly minimum rates also. It is usually found, however, that true public spirit is never developed while the higher government looks jealously at every increase in the rates of the lower government, and therefore a complete separation of the sources of taxation usually permits the freest development of all the functions of government. Such a separation was aimed at in the Montague-Chelmsford Report, and still more by the Meston Committee which did not even favor the division of the revenues from fees, and was opposed to giving the provinces any part of the income tax.

We must, then, inquire what taxes are best suited to local governments. The problem is more complicated in large countries like India and the United States of America, which have at least three different grades of governments to be satisfied—*i.e.*, in India, first the Imperial, second, the provincial, and third, the smaller local governments, namely, municipalities and district

boards. In the United States the Federal Government obtains its revenues from customs, excise and the income tax; the States (corresponding to provinces) from a small tax on land, from taxes on corporations, and inheritance taxes; the smaller local governments chiefly from taxes on land, on buildings, from local licences, and from a wheel-tax for the upkeep of roads. Bastable agrees that these three are the best fitted for local taxes.

Of all taxes, taxes on land are best for local purposes. Land is the one source of taxation which absolutely cannot run away from taxation. As Bastable points out, there is little else to tax in rural districts, and in cities the landlords should pay as they are the ones chiefly benefited by local expenditures. The same reasons apply to a house tax, though with less force, for houses can be allowed to run down after some time, but they cannot move away quickly. If a merchant wishes to sell goods or use a vehicle in a district, he must get his licence in that district.

On the other hand, customs duties must belong to the Central Government, if they are levied at the national boundaries, for they are a tax upon the consumers of the whole country, and duties collected at the boundaries of provinces or districts would be exceedingly oppressive and costly. Octrois are easier to collect, but they are just as detrimental to economic progress, as they prevent trade between city and country with all the division of labor and organization of industry and commerce which depend upon it, while the advantages of protection are absent in the case of cities since the movement of labor and capital is unhindered by great national differences and there is no great disparity in industrial knowledge. Secondly, excise duties are usually assigned to the Central Government, because taxation on production

would drive out capital from districts which taxed it, and excise without an equivalent import duty would defeat its own end by driving out home producers at the expense of foreign producers. These difficulties are overcome if the Central Government determines for all the local governments the rate of the tax and arranges for equal or higher import duties. But then the desired freedom of taxation is taken away. In the third place, the income tax should be assigned to the Central Government. Local income taxes drive away business and are either evaded or else mean double taxation, when a man owns property outside his own province. Especially if the tax is to be progressive, wealthy men will try to evade it, and only the Central Government can discover the whole income so as to determine the rate. The same objections apply with some force to the inheritance tax. But this is nevertheless a state tax in America. The difficulties of making it so are largely avoided if the rates are approximately equal in neighbouring provinces and each estate is taxed wherever the property is found.

Now let us examine the tax system of India and discover how far it has been made to conform to these fiscal ideals by the reforms, and whether it is possible to perfect it still further along these lines. The Imperial revenues include Customs, the Income Tax, Salt, Opium, and profits of Railways which cross Provincial boundaries. All of these should usually be central revenues. The provincial revenues include Land Revenue, Excise, Stamps (with a few exceptions), and the profits of Irrigation and of Feeder Railways, and all the receipts accruing in respect of provincial subjects. The Gazette of India of May 15th, 1920, which laid down the rules for fiscal devolution, followed the Meston Committee in striving for an absolute separation of revenues.

But a new Gazette Extraordinary published only two weeks ago (December) shows that the Government has at last yielded to the importunities of the richer provinces, and has permitted the provinces to retain a share in the growth of the income-tax, when this growth is due solely to an increase in the amount of income assessed, and not to any increase in the rate of the tax. This is arranged by giving to the provinces three pies on each rupee of income assessed less whatever this amounts to in the present year, 1920-21, less also one-fourth of the costs of collection.

The outstanding feature of this division is the giving of the whole land revenue, the greatest single head of revenue, to the provinces. While recognizing that this was ideal in theory Bastable saw that it was often impossible in practice. In 1890 he wrote, "We can hardly imagine the Indian Government yielding up the land revenue to the provinces." But now the impossible has actually been carried out in the interest of sound finance. It must be admitted that it has been made possible by the growth of industry and commerce, and thus of customs and the income-tax on non-agricultural incomes and also by the growth of provincial responsibility for many of the duties of the Government.

The excise duty was already more than three-fourths assigned to the provinces, and was thus easily given over. But it must be clearly understood that the excise in India is made up of two parts: first the duty per proof gallon, or the true excise, which is a tax on production; second, the licence fees, which are a tax on the right to sell or retail, and correspond to the local licences which Bastable approves as local taxes. The duty per proof gallon which is nearly two-thirds of the whole in the United Provinces is a revenue of the central government in nearly all countries. It may safely be treated as a local revenue only if the

central government fixes the rates (and also imposes equal customs duties), in which case it ceases to be a ready source of fresh revenue. The licence fees, however, can and should be raised locally at the will of the community concerned. With the growth of prohibition sentiment the excise is likely to prove a vanishing source of revenue. But there are other commodities which are frequently the object of excise in other countries, such as tobacco, playing cards, etc. In India where more sugar is probably consumed in proportion of the wealth of the country than anywhere else, a tax on refined sugar might prove productive and could not injure the poor who depend upon home-made *gur*. The profits of local public works, such as irrigation and feeder railways, naturally belong to the locality which has an interest in constructing them.

The revenues from stamps might go either to the government responsible for collection or to that responsible for imposing them. The stamp tax on small cheques is a great hindrance to the development of banking; if it should be abolished for cheques under Rs. 20 and made only half an anna for cheques under Rs. 50, it would probably yield a higher revenue because of the greater use of cheques.

With regard to the income tax I regret that the Government did not hold out. The Central Government needs expanding revenues and it would have been possible so much the sooner to do without the provincial contributions. I shall try to show that there were other taxes open to the rich provinces which would have more than made up for any loss due to the assignment of agricultural land revenue to the province whence it came. The present plan is bad in theory and only tends to make the provincial contributions permanent.

A little calculation will show that it was impossible to give all these revenues to the provinces without causing a deficit in the Imperial budget. This is

reckoned at 983 lakhs or about £6.5 millions. This deficit is to be met by the contributions from the provinces. These contributions are at first to be proportional to the revenues now paid in each province toward the Imperial income, but the proportions are gradually to be changed until 1928 when each province's contribution will be proportional to its own revenue. It appears that Madras, the United Provinces and the Punjab have been paying more than their share to support the Government of India, so that their contributions will gradually decrease, while the shares of Bengal, Bombay, and Bihar and Orissa, which appear to have been favored provinces, will gradually increase. This contribution may be gradually decreased or increased, if required, with the sanction of the Secretary of State. It would have been simple to make each government quite independent, and this could have been achieved in any one of the following ways: first by letting the Central Government keep the excise duty per proof gallon, which would have been more in accord with both theory and practice elsewhere; secondly, by allowing the Government of India to keep the revenues from Stamps; or thirdly, by making the income tax apply to agricultural incomes also and reducing somewhat the incidence of land revenue. The first would have been the simplest and the best plan for the present. The provinces would still have controlled the local licences. However, if the contributions are gradually reduced, so that the provinces are enabled to keep the whole excise duty, the present plan will prove beneficial; but there is danger that they will serve as a precedent for additional contributions, whenever the Central Government wishes to escape the disagreeable necessity of increasing its own taxes.

In order to increase the provincial revenues, which

may be necessary for compulsory education and other needed reforms, there still remain several sources of taxation available. The inheritance tax may result in the removal of property if it is not levied in all the provinces simultaneously, but there is not so much incentive to evasion, and the tax is not so severely felt, if it is progressive directly with the size of the estate and inversely with the kinship of the legatee. There is much to be said for the inheritance tax on both political and moral grounds, and it should form a part of every complete tax system. Some form of unearned increment tax, or some tax to force idle land into use is exceedingly desirable. With the sanction of the Governor-General-in-Council such taxes may be declared sources of provincial revenue. The Governor-General-in-Council may also sanction the raising of loans by provinces on the security of their revenues, either for emergencies, such as famine relief and the payment of debts falling due, or for capital expenditures on improvements, such as irrigation, electric power, communications, housing, reclamation, development of forests, and similar projects. For improvements benefitting special localities, special assessments or betterment taxes may reduce or entirely remove the necessity for borrowing. The erection and the equipment of the new schools should also be considered a productive project for which loans may be raised, for the tax-paying capacity depends on a skilled population more than on any other improvement.

Proposals for either borrowing or new taxation may originate, either with the ministers in charge of transferred subjects, or with the councillors in charge of the reserved subjects. They must be considered by both sides of the government, and decided by the Governor and the side of the government which initiated the fresh taxation or loan and is therefore to receive

the revenue therefrom. The allocation of other revenues to the two sets of subjects is by agreement between the ministers and councillors. If there be no agreement, the Governor may assign fixed proportions of each sort of revenue and of the balances to each side. If there be no agreement at the time of making the budget, the figures of the previous year stand. It is evident that the system of diarchy raises some entirely new problems in public finance, and it will be interesting to see how they are worked out in practice. I can think of no better solution than that which seems to be intended, namely, that each side of the Government shall have separate sources of taxation as far as possible, and that other sources be divided in fixed proportions. For example one side (probably the reserved subjects), might have the excise and the provincial share in the growth of income tax, while the other would have the inheritance tax, stamps, revenues from public works, and the new taxes on the unearned increment or on the site-value of the land. Both sides would have the power to levy the land revenue up to a certain maximum rate on the rental value. Of course each side would have the receipts accruing in respect of its own subjects. It appears that at times there will be a race between the councillors and ministers to initiate new taxation in order that they may claim fresh revenues for their side of the Government. At that rate all the possible sources of taxation will soon be exhausted. Moreover, it is quite impossible to decide the whole question of provincial revenues without first considering the possibility of still further devolution and the division of revenues between the provincial and the smaller local Governments, that is, the district boards and the municipalities.

The District Boards obtain from 50 to 60 per cent

of their revenue from the local cess on land, which amounts to one anna in the rupee or $6\frac{1}{4}$ per cent on agricultural rents. Except in Madras, where there is a capitation and house tax, this is practically their whole income from taxation. Thirty per cent of their revenue consists of grants from Government for public works, education, etc., and the rest consists of fees. There was a proposal in the United Provinces to give district boards power to tax agricultural incomes up to two annas or $12\frac{1}{2}$ per cent, and to tax non-agricultural incomes; also to levy a cess for the building of feeder railways to be owned by the district boards. These proposals have now been embodied in a bill, but the proposed powers have been given to divisional councils, instead of to district boards. It was felt that the boards were grievously in need of greater funds, but had not the capacity to manage them properly.

Municipalities, taking all India, derive 62 per cent of their revenue from taxation, about 10 per cent from Government grants, the rest from fees, markets, and rents of municipal lands. Of the income from taxation, one-third is from the tax on houses and lands, one-quarter from octrois or terminal taxes, one-quarter from water, light and conservancy services, and the remaining sixth about equally divided between the tax on animals and vehicles, the tax on professions and trades, tolls, and taxes on personal property. In the United Provinces octroi and terminal taxes form more than half of the income from taxation and the house tax only one-twelfth.

This is the least satisfactory part of the Indian tax system. If we take the average land revenue to be from 40 to 45 per cent of the annual rental value, then add the local cess for district boards it will come to 46 to 51 per cent. If another anna is added for the proposed divisional councils it will average

between 52 and 57 per cent of agricultural incomes. It must be remembered that this is a tax on both land and agricultural capital, since it is impossible to separate the land from permanent improvements. In cities, on the other hand, even if we suppose the income tax to fall partly on the rents of lands and buildings, taking its maximum rate of one anna or $6\frac{1}{4}$ per cent, and if we suppose the house tax to be levied at the maximum rate of 12 per cent, adding the two we have only a tax of $18\frac{1}{4}$ per cent on non-agricultural land including buildings. We cannot include the super-tax as it does not bear on the marginal landlord at all, and is only taken from large surplus incomes. We should not include the whole water rate, as it is in the nature of a price paid for a direct service. If the rich are made to pay for the water of the poor, a portion of the water rate may be included, but as the maximum water rate is only 12 per cent, we cannot add more than 6 per cent on this score. Thus we find at its maximum non-agricultural land and its improvements will not be taxed at more than half the rates applied to agricultural land and buildings. In practice it is usually far less than half. In Allahabad the house tax is Rs. 4-1-0 per cent the water tax Rs. 6-12-0 per cent. An increase of 50 per cent in the latter has been applied for. If we take half the water tax at the enhanced rate and the whole income tax rate of $6\frac{1}{4}$ per cent we get only $15\frac{1}{2}$ per cent as the combined burden on land and buildings. In many municipalities the house tax is even lower.

Besides this great inequality there are numerous other defects in the present system. There is no tax at all on the idle unproductive land, which condition stimulates speculation and the thriftless use

of big empty compounds. There is probably no country in the world with so much absolutely useless land in its big cities. If the land be used for a guava orchard, and have a single hut which may be called a house on it, it may be taxed both for agricultural land revenue and municipal house tax, a form of double taxation which may usually be avoided by building the house on a separate piece of land. No matter how the value of agricultural land in the heart of a city may have doubled or quadrupled, while the land revenue settlement remains the same it cannot be touched by the municipal tax, but may be held indefinitely for speculation. Houses which are without tenants for 90 days or more pay no house tax for that period, which stimulates speculation by permitting the landlord to hold out for a high rent. The rental value of Government land is reckoned at only 5 per cent of the capital cost of land and buildings, but is probably far above that figure. Municipal lands are leased for from 20 to 30 years, and at the expiration of the lease the rent can only be raised 100 per cent, no matter how high values may have risen. Recently in Allahabad these rents were raised 50 per cent uniformly, though there must have been great variations in the actual renting possibilities of different properties. If any property remained unrented at the new rate it was leased by auction. These last are minor points.

Turning to the other taxes we find that the octroi is the most important by far in the majority of the provinces. But in my opinion it cannot be condemned too strongly. All taxes which check the growth of transportation cut the thread of economic progress at its very beginning. Cheap transportation makes possible wider markets. Wide markets make possible large scale production. Large scale production makes poss-

ible division of labor both in industries and between districts, especially between city and country. The effects of doing away with these taxes may not be immediate, but they are sure. The result is the growth of population. The value of land will probably increase more rapidly than other values, because of the great advantages of the concentrated industry. If a tax on land values were substituted for the octrois, I do not believe that there would be more than a temporary fall in land values. But in the end they would increase in spite of the tax. Bengal, Madras, Burma, and Assam have no municipal octrois. Their evil has been recognised in the United Provinces, where the terminal tax, or the tax on professions, is being substituted. The terminal tax has advantages over the old octroi system in the cost of collection and in administration, but it is still a tax on transportation and on economic development. Taxes on income and personal property are not suited for small local Governments and are sure to lead to evasion or oppression. The water, light, and conservancy rates should be maintained. Taxes on animals are needed for sanitary reasons. Taxes on industries and professions are required for purposes of regulation. Taxes on vehicles are more reasonable than ever now that high speed motor vehicles tear up our roads at a rate that increases as the sixth power of the speed. The tax might increase at a similar rate. The other local taxes should be relegated to the junk-heap, especially those which check the development of trade. In their place there should be a further development of taxes on land, which, as shown above, is the best source of local taxation.

Sooner or later, as the electorate becomes larger and gains experience, further devolution of fiscal powers to the smaller local governments will become

desirable. It has been suggested that one-third of the land revenue could be assigned to them immediately. Is this possible? One-third of the land revenue (less one-third of this cost of collection) would be more than 9 crores. Of this it is probable that less than one crore comes from within municipal limits. Therefore at least 8 crores would go to the District Boards. They now receive two crores in grants which would presumably cease. Thus they would have a balance of about 6 crores. With this it ought to be possible to introduce free primary education and other improvements and still reduce the local cess on land considerably. The arrangement should be, supposing 51 per cent of the rental value is now taken, that the Provincial Government could take up to 34 per cent, and the District Boards up to 17 per cent. Then the District Board itself can fix the rate. It may prefer to reduce taxation rather than to increase expenditure. At any rate the increased local cess now proposed in the United Provinces could be avoided.

The Municipalities would not benefit by this assignment of land revenue to the district where it was collected. Municipalities now receive grants and advances of about 3 crores from Provincial Governments. I have not been able to obtain any exact figures for the amount of land revenue collected within municipal areas, but it probably is not far from 3 crores also. I believe that the collection of Land Revenue within municipal boundaries should altogether cease. This would prevent a very unjust form of double taxation, and at the same time clear the ground for the proper taxation of land by the municipalities. If the Provinces gave up this 3 crores of Land Revenue the cities should give up their 3 crores of grants. The octrois and other undesirable taxes of all the municipalities of India amount to about 2 crores. If

these are also abolished the cities will lose some 5 crores of revenue. But their burden will have been lightened by the amount of the land revenue reduction. Certainly they could obtain several times what they would lose by the taxation of land values. If only rentals are taxed this must be supplemented by taxes on unbuilt land and on the unearned increment of land values. All land should be taxed whether used or vacant, and all houses whether rented or empty. The valuation of city land should be carried out more frequently, because its value increases so rapidly. It is already done every five years in some Indian cities, and in some Western cities the land is valued every year. This taxation would come from a source almost untouched in India. Moreover, further increases in all revenues would soon result from the economic progress due to better taxation. The tax on land values in New York City alone is greater than the whole Land Revenue of all India. This is not an isolated case. There is hardly a city of the West whose land is not worth more than all the agricultural land of the surrounding province. The taxes of all sorts paid by Paris average one-fourth of the taxes paid by all France. The rents of Bombay, Karachi, Calcutta, and other Indian cities are increasing by leaps and bounds. The idle land and idle buildings should be taxed into use. The cities of India pay a miserably small part of her revenues.

By the plans suggested above the provinces will lose 11 crores of revenue, but they will also save 5 crores of grants, contributions and advances. Thus only 6 crores would remain to be realized by an inheritance tax. It appears to me that the municipalities should also contribute something to the Provincial revenues. The general rate of land revenue could also be reduced by making the rate progressive.

If for the sake of symmetry the central government were to tax agricultural incomes as part of the general income tax, the provincial contributions could be abolished. Only by this plan would the high incomes of those who are both landlords and capitalists be reached.

In conclusion, the following is a summary of the changes suggested:—

1. The provincial contributions should be abolished, preferably by including agricultural incomes in the general income tax.

2. The land revenue should gradually be turned over to the District Boards, as they take over the control of local education, police, sanitation, and agriculture.

3. One-third of the land revenue could be assigned at once if the provinces levied inheritance taxes. These should be levied in any case to provide for compulsory education and other pressing needs, and should progress in two ways as described above.

4. The municipalities should depend almost entirely upon improved taxation of land, either (a) by the present taxes on rentals plus taxes on improved land and unearned increments, or, preferably, (b) a general tax on the capital value of city lands, frequently re-valued.

INDIAN FINANCE AND THE REFORM SCHEME¹

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After opening with a brief historical introduction, Professor Shahani proceeded :—

A permanent arrangement of "divided heads" was then established which the Reform Scheme is now displacing in favor of a system of separate heads, the Imperial deficit being guaranteed by provincial contributions. All realizations from general stamps and income-tax are to be added to the present Imperial sources of revenue, *viz.*, customs, opium, salt, railways, tributes, interest, etc., while the provinces are to retain wholly land revenue, excise and judicial stamp duties and profits from irrigation, with corresponding charges, including Famine Relief Fund. Provincial contributions for making up the Imperial deficit are to be the first charge on the provincial exchequer. These proposals were received with approbation both by the Functions Committee and the Parliamentary Joint Committee, but were opposed by some provincial Governments, as well as by a substantial portion of the general public. A Finance Relations Committee was subsequently appointed to report on the details of the provincial contribution system and on the reasonableness or otherwise of provincial dissatisfaction. A few alterations

¹ Portions at the beginning and end of this paper and at one place in the middle are omitted. Professor Shahani's paper was printed in full in the *Indian Review* for January, 1921, page 21 [Ed.]

which they recommended did not go very far to appease the provincial cry. Stamp duties, general as well as judicial are, by them, wholly to be allotted to the provinces, income-tax being confirmed as an Imperial asset. To determine the ratio of the provincial contribution they gave up the basis of realized surpluses adopted by the Reform scheme and worked out the proportion of provincial increased income relinquished by the Imperial Government. The provinces are by this arrangement unblushingly told that by some generous indulgence on the part of the Imperial Government, they are allowed to come into possession of vast riches—"windfalls" they call them; therefore, these contributions are neither a provincial favor nor Imperial tyranny. For the year 1921-22 the Meston Committee recommended figures somewhat different from those put forth by the framers of the original report and also planned out a scheme of standard ratio to be arrived at in the course of seven years. In short the system which is intended to be worked out in the near future is not different from the one recommended by the four members of Lord Dufferin's Finance Committee—Sir Charles Elliot, Sir William Hunter, Mr. Justice Cunningham, and Mr. Justice Ranade, all of whom had, however, included the assessed taxes (income and professional taxes) among provincial assets.

As stated above the peculiar nature of the Indian Government has necessarily affected the character of our public finance. No civilized country of the West can be much of a guide to us. Both the United States of America and Germany—two most outstanding instances of federal governments or federations—have been formed on the principle of the constituent parts having sought a union by surrendering a portion of their independence as states into the

hands of the Central Government which it was intended by them to bring into being. Modern India, on the other hand, was always understood to be one single state, and the different provinces were only administrative parts of that single whole. Measures in the direction of decentralization were merely attempts at administrative devolution—a sort of relief sought for and obtained by the Supreme Government in a considerable part of the work which could not be executed well from the centre; but the idea of unitary Government was never abandoned. It is only the Government of India Act of 1919 that ushers in a distinctly new principle, though to all appearances the intended measures are a further extension in the direction of devolution. In that part of the provincial Government which is to be entrusted to the Governor and Ministers, the responsibility of Government is shifted from the Imperial Government to the people's representatives in the Legislative Council. In that portion of the provincial Government the principle of autonomy is distinctly introduced. It is true that it is still the Central Government divesting itself of a certain portion of authority and interference; but this surrender of powers and responsibility into the hands of the people gives the matter a very different turn. And presumably it is a step in the direction of more complete autonomy, the realization of which is only a question of time. Therefore, what we have in our midst is a Central Government, ridding itself of responsibility for provincial governments and confining its sphere of action only to all-India affairs.

Now finance is the vehicle of Government. Before any attempt is made to comment on the financial arrangements at present contemplated, one point must be made very clear. As Governmental functions are

divided everywhere, between the central and local bodies, or the central, provincial and local, the respective financial resources and charges of these bodies are an index to their relative importance in the national organization.

In America the heaviest figures are those pertaining to local finance while the federal comes next and the state or commonwealth finance stands last. This clearly reveals the important fact that the functions performed both by the local bodies and the federal Government make a heavier call on the taxable material prevalent in the country. This division of functions is always influenced by the principle of utility. Are certain wants of the community likely to be served best by the local agency or provincial government agency or the central government agency? Matters which demand uniformity and co-ordination, or relate to the safety, integrity and dignity of the whole state, will have imperatively to be worked from the centre. To distinguish such from the rest is not difficult. The line of demarcation between the provincial and municipal is, however, not very distinct; and except in a few requirements like university education, appellate courts of justice, and major irrigation works, perhaps the function of the provincial governments may come to be reduced to considerable insignificance. The conditions and circumstances of every country will determine this point best. Where the local spirit runs high and public spiritedness is of a lofty standard, a desire to manage their own affairs to the very maximum will be soon brought into play by the citizen body. In India, there is an additional difficulty in the way of maintaining the provincial governments, on the arrangement now upheld. The linguistic basis has already many advocates; and if the masses are really to feel a living interest in the Government of the day,

the holding of the deliberations of their Government in their own language is the very least that should be allowed them. It is possible then that the present provincial arrangement may soon be recast; and it is also not unreasonable to look forward to that growth of municipal and other local bodies which necessitates their appropriation of a number of functions now intended mainly for the provincial Governments. Statesmanship of that day may, however, be expected to readjust the financial relations in the light of the altered administrative importance of the constituent parts of the national Government.

Granting, however, that the arrangement of administrative divisions now devised prevails for a long time to come, we might next examine a few principles of the science of finance and Government likely to make themselves felt the most under the Reform Scheme. Naturally, the question of provincial contributions first comes in for a careful analysis and some share of speculation. It is quite arguable that the needs of the parent state may well be met out of the funds allotted to offsprings; but filial ingratitude was not reserved for Lear's daughters alone. Does the Government of India expect that when provincial money bills come up before the provincial legislatures, the executive will always find itself so strongly entrenched as to defy all sorts of ingenious attacks against the Government of India expenditure which is not without notoriety for extravagance? The provincial taxpayer will have a right, through his representative, to make a searching enquiry into how his money is spent; and it will never do if attempts are made to silence him with quoting chapter and verse of the law that gives away so much of his pecuniary sacrifice to a Government over which, in that particular direction, he has no control. We are teaching the

people to use their powers of granting supplies as the best guarantee against administrative evils or against violation of their constitutional rights. To tell them that they have got this power, and almost in the same breath to make it nugatory in a substantial part is, to say the least, making the provinces suspicious of the good intentions that undoubtedly are behind the Reform Scheme. We are admittedly moving in the direction of responsible government. The essence of this responsibility to the governed lies in the fact of the executive having to carry the legislature with itself in the matter of supplies required for the needs of the Government. If a substantial portion of the provincial revenue is given away to another executive body which is far above the situation of having to explain to the provincial legislature as to how these contributions were disposed of, the provincial executive could not satisfactorily discharge the duty of a fit custodian of provincial funds. On the other hand, if the Imperial executive is at any time hereafter to be made responsible to Imperial legislature in the matter of supplies and funds entrusted to it, an attitude of breezy indifference to its own legislature as regards a good part of its revenue is not very conducive to healthy constitutional growth; for if nearly one-fourth of its revenues are secured by an act guaranteeing it these provincial contributions, it is only for the other three-fourths of its supplies that it seeks a vote of the Imperial legislature; and *a fortiori* the supplies not granted by the house cannot be a legitimate theme for scrutiny when expenditure pertaining thereto is under review. To give the British Parliament a living interest in the Indian Budget, a portion of the home charges is now thrown on the British Exchequer, the underlying constitutional principle being that the House cannot legitimately move a vote

on the supplies never granted by it. Therefore, to respect the fundamental principles of constitutional government, it is incumbent upon the framers of any subsequent measure of reform in Indian Government to put an end to this system of provincial contributions, whether they smack of spoliation when worked on the basis of realised surpluses as the Montagu-Chelmsford Report recommended or are placarded with the Christian motto "Do not covet thy neighbor's (in this case parent's) property" as the Meston Report would have this business look. A provision of absolutely segregated sources of revenue for these two portions of Government, without either eleemosynary or "Stand and deliver" relationship, will be the only line on which the Indian public finance can work without friction or irritation anywhere.

The Meston Committee have dwelt at sufficient length on the principle of equity in the distribution of these provincial contributions, and they have frankly confessed that any scheme devised for the purpose is not likely to please all. Long before the popular representation had come into the Legislative Councils, these bodies, the outside public and some of the provincial Governments had placed their strong protest against the award of the Finance Relations Committee. These mutterings are likely to grow with the growth of time, and it is greatly to be feared that there will be no love lost between the future Imperial and provincial Governments.

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If this policy of exacting 'contributions' from the provinces is to be abandoned, as dangerous to the growth of responsible government, liable to cause irritation, nay, heart-burning, in the provinces, as baffling equitable distributions and therefore difficult

to practise, statesmanship demands an early relinquishment of it, and the substitution of a workable scheme of absolutely separate heads of revenue. Elasticity and a reasonable amount of certainty are essential to any scheme of taxation, whether provincial or Imperial. The latter is likely to be subject to sudden unforeseen and peremptory calls on its purse by the advent of a big war; therefore it is incumbent to provide it with heads of revenue capable of yielding increased return at a pinch. It is also necessary to bear in mind the importance of a familiar maxim of finance, 'An old tax is no tax.' People will more willingly bear a little increased burden in the impost to which they are used than submit to something with which they are not familiar. It is devoutly to be wished that wars ceased and military burdens were reduced to the minimum possible. But taking the world conditions as they are, and with neighbors of whose pacific intentions one is not quite sure, the Imperial Government must make a substantial call on the resources of the country for the regular upkeep of the army, and have in reserve certain resources for emergency financiering. Elasticity as well as certainty in the Imperial finance is on this account of far more importance than in the provincial finance. When wars become a wholly antiquated phenomenon and a sort of United States of the World permits a free and peaceful internal development of the different units constituting that world federation, the financier of that blessed day will certainly recast the whole situation and allow for the utmost elasticity of revenue in the lines of education, sanitation, industrial growth and happiest homes for every member of the community. Facing the stern reality of facts and postulating the importance of the automatic increase of revenue in all parts of Govern-

ment machinery, with certain reserved forces at the disposal of the Imperial branch, an attempt may now be made to see how an adequate supply may be found first for Imperial expenditure, and next for the provincial. In making the provision for the Imperial expenditure two financial principles ought, as far as possible, to be rigidly adhered to: (1) that current income must accrue from current industry; (2) other things being equal, a Government should select for the purpose of taxation those industries with which it holds some fundamental relation. With the development in the provincial autonomy, it is all the more imperative to preserve the unity of the country by making the Imperial Government directly interested both in the uniform regulation of trade, foreign and interprovincial, and the establishment of an efficient industry. The exclusive right of the Imperial Government to levy import and export duties has been an undisputed fact ever since the customs were inaugurated in India. The railway monopoly further enables the Government to maintain co-ordination and uniformity in the matter of commerce. Without commercial unity the spirit of solidarity, so essential for the existence of India as a nation, would be impossible of realization. "The logic of the situation reserves the control and taxation of commerce to the Government which represents the sovereignty and unity of the people" (Adam's *Finance*, page 496). This part of the Imperial system of taxation has the further merit of elasticity, since the revenue here can, under normal conditions of trade, be increased by a little higher taxation. But a system that rests largely on foreign commerce has an element of uncertainty in it. A great exigency like the advent of a war may embarrass commerce, curtail income and even baffle the financier's attempts to raise the rates by giving

him decreased returns. To establish an elastic or responsive revenue for the federal Government, not altogether dependent on the exigencies of foreign commerce, a productive internal revenue must be made available for the Imperial exchequer. The machinery of the system of excise duties hitherto maintained and kept in operation by the provincial Government should be transferred to the Imperial Government. A sure provision of ten millions sterling capable of increase with the improvement of administrative machinery, the inclusion of tea and tobacco under it, and admitting of elasticity under "exigency financiering" ought to cut the Gordian knot of Imperial deficits. This is further supported by the consideration that a uniformity of excise laws is essential. To preserve a healthful and equitably distributed industry the conditions of manufacture should be, so far as possible, the same in all parts of the country; and the only means of attaining this uniformity is for the Imperial Government to assume exclusive control over their administration. The argument that excise has been so long a provincial head ought not to be very much in the way of this proposed transference, since "in its essence and main features the excise administration in most provinces of British India has progressed on uniform lines". (*The Times of India Year Book*, 1919, page 186). An Imperial excise system, which had within its purview taxes on alcoholic drinks, including malt breweries and distilleries, opium and other narcotic drugs, tobacco, tea, salt, and possibly country-made cottons, should make the exchequer independent of the arbitrary, vexatious and whimsical system of provincial contributions and admittedly serve the purpose of maintaining the industrial unity of the country. It would further enable the Imperial financier to hand the income-tax back again to the provinces, and thus remove the

sore point between it and the two commercial provinces of Bombay and Bengal. A further provision of 3 to 4 millions sterling will complete the tale of Imperial requirements. This may be obtained by reserving general stamps to it, consistent with the view maintained in this paper that instruments of commerce and industry should, as far as possible, be maintained on the basis of uniformity. If any administrative objections of a convincing character be urged against this separation of general from judicial stamps, the deficit may be easily made up by the introduction of succession or inheritance duties on big fortunes, the levy of which may reasonably be claimed by the national Government which stands for the sum-total of the citizens whose business activity rendered the accumulation of property possible. The cosmopolitan character of most of these fortunes makes the State a fit participator in the succession or inheritance left behind.

If the arrangement proposed above be accepted, the provincial exchequer will be found in a commodious position with land revenue of a fairly fixed character as its back-bone and one substantial source of revenue in the shape of a comprehensive income-tax, both certain and elastic in its character. These two, supplemented by revenues from stamps, forests, and profits from irrigation, will ordinarily suffice for its needs. With the growth of municipal and other local bodies, a considerable readjustment of functions will be inevitable. Consequently the local bodies will imperatively demand freedom of space and breathing; and much shifting of the present methods of raising revenues will be unavoidable. For the present, the provincial financier will have steadily to bear in mind the fundamental maxim that in a poor province the question of fiscal reform is primarily one of expenditure. Pro-

vincial civil departments, particularly in Bombay, are notoriously top-heavy ; while the rank and file, the "proletariat" of service are in their standard of life not very much above the "sanscullores" of the French Revolution period. It is distressing to see this nonchalance at head-quarters in saddling the public funds with extravagance for which no satisfactory explanation has been given anywhere. That "economy in expenditure is no threadbare motto" is yet to be illustrated in the conduct of the coming reformed councils who will, it is hoped, watch public funds with the vigilance and jealousy of the dragons of fairy tales.

THE INDIAN STATES AND THE INDIAN SEA CUSTOMS

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Not the least important aspect of the constitutional changes which are now taking place in India is the alteration of the financial relations between the Provinces and the Central Government. Broad questions of public finance have been raised in the attempt to give the Provinces financial autonomy; and the settlement arrived at is in its details a compromise, although in its main features it is soundly based upon well-recognized principles of finance. The two great sources of revenue for the Central Government will be the customs and the income-tax, which are both likely to expand as a natural result of the economic development of the country. Both have also considerable elasticity, so that additional revenues can be raised in any time of emergency by a simple increase of the rates at which the taxes are levied.

The extraordinary elasticity of the customs revenue, and the temptation which is sure to arise to increase the rates of duties either in the general tariff or on selected articles is causing a good deal of concern to the Durbars of some of the Indian States. It is obvious that, when the Central Government is in dire need of further revenue, it is likely to seek relief

by the increase of indirect rather than direct taxation; and with the growing independence of the Indian Government from British control the great force which tends to keep customs duties low will be weakened. Coinciding with the need of further indirect taxation there is likely to grow up a demand for the protection of Indian industries. It is not unreasonable to anticipate therefore that we shall find very important changes taking place in the customs revenues of India.¹

These considerations raise a constitutional issue of the highest importance to the majority of the Indian States; because, as is well-known, they have no part or share in the customs revenue collected by the Government of India. So long as the general tariff was low, this was not a question of any practical importance. The incidence of some of the customs revenues collected by the British Government in India fell upon the consumers in the Native States; but this might be regarded as no more than a fair charge upon them for the security afforded by the *Pax Britannica*. The increase of the general tariff to 7½ per cent with special duties, such as 10 per cent on sugar and 15 per cent on tobacco, has begun already to give this question a different aspect.

These increases of duties, together with the great expansion of the import trade which has taken place since the termination of the war, have already led to a remarkable growth of the customs revenue in recent years, as is shown by the following figures of import

¹ The anticipations of this paragraph, written early in December, 1920, were partially fulfilled on the 1st March following, when the Finance Member announced the increase of the general import tariff from 7½ to 11 per cent, the duty on sugar to 15 per cent, on motor cars and other luxuries to 20 per cent, and on cigars and cigarettes to 75 per cent. At the time of sending this to the press there comes the announcement that the Government proposes to appoint a Commission to examine the whole question of Indian Tariff policy. It seems almost inevitable that the growing national sentiment will demand the protection of home industries, as every growing nation has done including the British self-governing Dominions.

and export duties collected at British Indian ports¹:—

YEAR	LAKHS OF RS.
1908-09	6,89
1909-10	7,04
1910-11	9,50
1911-12	9,21
1912-13	10,23
1913-14	10,79
1914-15	9,02
1915-16	8,32
1916-17	12,51
1917-18	15,50
1918-19	16,40
1919-20	20,42
1920-21	28,26

Political Status of Indian States

In proceeding with the discussion of the question here raised it is impossible to avoid reference to the political status of the Indian States. This is a very complicated subject, for the relation of every State with the British Government is regulated by a series of treaties made at different times under various circumstances. To gain an intimate knowledge of the political status of all the States is a life study. Moreover, considerable changes are being made in connection with the present constitutional reforms which are not yet fully announced. The States are ranged in several classes according to the degrees of independence which they enjoy. They range from large States like Hyderabad, Mysore and Gwalior, which are in direct communication with the Government of India to the petty States whose chiefs enjoy a limited sovereignty under the tutelage of Provincial Governments. The former are in all essential respects inde-

¹ Excluding the excise duties on cotton manufactures and on motor spirit.

pendent Governments, excepting that all foreign relations must be conducted through the British Government, and that the protection of British Law is afforded to British subjects in State territory. On the other hand the chiefs of petty States are but little removed from the status of big landlords with magisterial powers. There is, however, one feature which is common to all the States, except some of those in charge of provincial governments, namely, that they have complete financial autonomy, which extends to the right of levying customs duties on goods crossing their frontiers into or out of their States. The State Government have their own customs officers who collect whatever duties their Ruler may choose to levy. The only right which most of the States have abandoned by treaty is that of levying transit duties on goods passing through to destinations beyond the State.

The abolition of the transit duties, which took place in most cases prior to 1890 brought the commercial relations of the Indian States with British India and with one another into harmony with the principles well-recognized throughout the civilized world. The damage which one country can inflict upon another by taxing goods in transit to it has long been recognized in Europe and elsewhere; and during the nineteenth century the levying of customs duties on goods consigned through to other countries has been almost universally abolished by a very large number of commercial treaties and understandings arrived at between the countries concerned.

Practice in Foreign Countries

There is still observable in Europe, however, a disposition to avoid reliance upon such commercial agreements. Every country seeks to have a portion of sea coast containing a good harbor within its

territory. The struggle between the Balkan States some eight years ago was largely concerned with this; and we notice the importance attached in the Treaty of Versailles and the subsequent settlements to providing newly created States with an outlet to the sea in neutral, if not in national, territory. Poland, for example, has been granted the "Danzig corridor", and the struggle over Fiume was about its allotment to Jugo Slavia as its port. Every country which is surrounded on all sides by land belonging to other countries, or is "land-locked", to use a convenient term, has this problem to face: either it must obtain access to the sea over some route by which its goods may travel free of customs levies and other interference, or it must enter into commercial agreements with surrounding governments providing either for goods to be consigned through to it in bond in sealed wagons, or for the neighboring countries to collect the customs duties on its behalf.

It will be interesting to study a few cases of land-locked countries by way of illustration of these principles which seem to have been universally recognized. I shall take some cases of foreign countries first, and afterwards a number of cases relating to the British Empire.

In 1893 Serbia had obtained the privilege by negotiation with the Turkish Government of despatching goods through the port of Salonika free of the Turkish customs duties. Early in 1914, after the close of the Turko-Balkan war, a treaty was concluded between Serbia and Greece which reserved the former a free zone at the port of Salonika and the right of erecting warehouses therein for the storage of goods in transit. The Convention provides that goods passing through Salonika shall be exempt from transit or port dues, and that there shall be special railway freight-

rates on Serbian goods intended for export. In the case of Switzerland goods landed at the ports of France, Italy or Germany for through consignment are put under seal of the customs authorities at the port of landing, and the obligation is laid on the railway administrations of seeing that the wagons are delivered with seals unbroken beyond the frontier. Bolivia is another land-locked country, and its Government has made agreements with Chile and Peru which recognize in favor of Bolivia in perpetuity "the fullest and most unrestricted right of commercial transit" through their territories and ports. Wagons in good repair only are to be used, and are to be forwarded under seal of the customs authorities; and at the inland frontier stations the customs authorities "will verify the condition of the seals". Bolivia is permitted to have its own customs officers stationed at the ports, presumably to watch the interests of the owners of goods consigned to or from Bolivia.

The case of Luxemburg is different, for this country solved its customs problem by entering into the German Customs Union. By this arrangement it received a share of the total customs revenue of the German Empire and territories within the German Customs Union, calculated on the population basis.

British Empire

There are numerous examples connected with the British Empire; but the most interesting and important as supplying analogies with the cases of the Indian States are those affecting the British Colonies and Protectorates. In South Africa, soon after the conclusion of the Boer war, the various colonies entered into a Customs Convention which provided for a uniform customs tariff at all ports, and for the collection of duties at the ports on goods consigned

to the inland colonies. These latter to be credited with the whole of such customs duties collected on goods consigned through to them, save only for a reduction of 5 per cent at the port of entry by way of allowance for the cost of collection. These arrangements applied also to the various British Protectorates in South Africa. The importer had the option of clearing his goods either at the port or at some inland Customs House. There was an office at Cape Town whose principal function was to trace the movements of goods from Colony to Colony by means of the returns supplied, so as to credit the revenue yielded by each consignment to the Government within whose territory the goods were finally consumed. This arrangement applied also to the various British Protectorates in South Africa. In 1910 the various Colonies were united in the Commonwealth of South Africa; and the Act of Union provided that henceforth the total customs and other revenues of the Central Government should be divided amongst the several States of the Union in accordance with their average expenditure.

With the four principal colonies united to form a union, the various territories and protectorates which had hitherto been included in the customs union remained outside. Several customs agreements were thereupon made to safeguard their interests. In the case of the Bechuanaland Protectorate an agreement was entered into with the Union Government in 1910, and it was agreed that out of the Treasury of the Union should be paid annually a sum bearing to the total customs revenue of the Union in respect of each financial year the same proportion as the average amount of the customs revenue of the Protectorate for three completed financial years prior to the 1st May, 1910, bore to the average amount of the whole cus-

toms revenue of all the Colonies and Territories comprising the Customs Union of South Africa during the same period. The proportion thus defined was subsequently ascertained to amount to 0.27622 per cent.

Precisely similar agreements were made on behalf of the territories of Basutoland and Swaziland providing for collection by the South African Union of Customs duties on goods consigned to their territories and the payment to them of a share of the total customs revenue of the Union and of all the territories and Protectorates similarly calculated.

In the case of the Nyassaland Protectorate there is an ordinance (No. 8 of 1906) which provides that all goods in transit shall be free of import and export duties, but that certain wharfage and road dues may be levied on imported goods reaching Nyassaland by river or road and destined to places beyond the Protectorate. A registration fee of 6*d.* per package has to be paid on all goods in transit.

Certain of the British Colonies in Africa are separated from the only available sea-port by foreign territory. In the case of Nyassaland communication with the coast is by steamers on the only navigable river, the Zambesi, at the mouth of which is Chinde, situated in Portuguese territory. Here the Portuguese Government has granted a small piece of land called the "British Concession" where goods in transit for Nyassaland and other parts of British Central Africa are landed free of Portuguese customs. The Transvaal is separated from the eastern coast by the Portuguese Province of Mozambique. A Convention made in 1809 provides that "merchandise of any origin or nationality imported through Lorenzo Marquez and bound for the Transvaal shall be entirely exempt from any charges whatsoever, excepting port and warehousing charges, and the charges now known as "Indus-

trial Contribution." Another provision of this Convention allows for the payment of Transvaal customs duties in Lorenzo Marquez and for their refund if the goods are not ultimately forwarded to the Transvaal.

The Uganda Protectorate is another land-locked area on the east of Africa. The countries bordering it are: on the west the Belgian Congo; on the south the territory that was German East Africa; on the east British East Africa; on the north the British Sudan; and at the north-east corner, across lake Rudolf, Abyssinia. An ordinance of 1902 provides that goods in transit will pay duty on entry into Uganda and a refund will be granted on leaving the Protectorate. When goods which were not declared for transit are exported, three-fourths of the duty paid will be refunded. Again, a free transit agreement was made between the United Kingdom and France with respect to the trade between Morocco and Egypt, passing through British and French territories in Africa. This provides for transit bonds being issued at certain customs stations.

These examples will be sufficient to show that, as regards Africa, the principle has been almost universally adopted that each State has the right to the whole of the customs revenue, wheresoever collected, upon goods consumed within its territory, within allowance only for the cost of collection. In the case of territories bordering on the South African Union a defined share of the general customs revenue has been granted in lieu of a separate collection of duties on goods consigned to the territory.

Special Arrangements for Indian States

It will now be appropriate to refer to the cases of Indian States in which special arrangements have been made for the assignment to them of the whole

or a share of the customs duties collected on goods entering their territories for consumption therein, or for the consignment of goods through in bond. As might be anticipated it is only those States which lie on the sea-board, like Baroda and Porbandar in Kathiawar and Travancore and Cochin in South India which have special customs arrangements; and States beyond British India, like Kashmir, to which goods are consigned in bond.

The ports situated in the Baroda State belong to two classes: (1) Kathiawar ports, (2) ports on the Gujarat Coast; and the rights of the State are different for these two classes. At the Kathiawar ports sea customs are levied by the Government of His Highness the Maharaja Gaekwar, and the revenue realised goes wholly to them. The State is, however, under an agreement with the British Government that it shall not levy at the above ports duties lower than those prescribed by the British Indian Tariff so as to divert the foreign trade from British ports to the said ports in the Baroda State. In return, the Baroda ports have been accorded the privileges of "British Indian ports", *i.e.*, goods exported from them to ports in British India are exempted from payment of any import duty on arrival at the latter. The State is, however, not under an obligation to forego its own import duties on goods arriving at its ports from British Indian ports.

The Baroda State has two ports on the Gujarat Sea-board, namely, Navsari and Billimora. The sea customs at both of these ports are levied and appropriated by the British Government. For this there is an historical reason, arising from the cession in A.D. 1752 by the then Gaikwar of half his conquests in Gujarat to the Peishwa. It happened that the customs revenues in the districts south of the river Tapti were included in the share of the Peishwa,

and later the Peishwa ceded his custom revenues in these districts to the British Government.¹

Porbandar, which is one of the first class States of Kathiawar, has full control of its own ports and levies its sea customs collected by a staff maintained and controlled by the State. However, in the year 1809 Porbandar ceded half of its port revenues in consideration of some obligation which the State owed to the British Government; and this was commuted in 1853 to a lump sum payment to the British Government of Rs.15,000 per annum. Goods imported from foreign countries other than British India are assessed with the sea customs duty in accordance with the British Indian tariff, whether they be consigned to Porbandar territory or are passing through to other States or to British India. In the case of goods arriving by sea from British India, State customs duties are levied; but in order to avoid placing too heavy a burden on trade, and the consequent diversion of traffic from the sea route to the land route, a graduated scale of customs duties is levied upon goods imported by sea to Porbandar from Bombay, the duty on each article being reduced according to the distance of the destination inland from the port, until the duty disappears for points at and beyond what has been decided on as "the limit of the port's sphere of influence."² The duties on most of the goods shipped coastwise from Bombay are collected by the British India Steam Navigation Company, whose steamers call at the principle Kathiawar ports, according to a through booking agreement between the States and that Company and the Railways serving the ports.

Turning now the South India we find that the

¹ For this information regarding Baroda Customs duties I am indebted to Mr. V. N. Metha, Diwan of Baroda State.

² This information has been kindly supplied by the Diwan of Porbandar State and the Chief Customs Officer of the State.

State of Travancore which has a long seaboard on the Indian Ocean, and the neighboring State of Cochin, formerly both had rights of levying such sea customs duties as they might please; but by various arrangements with the British Government measures were taken to remove unnecessary restrictions upon trade. A triple agreement, known as the interportal Trade Convention, which is still in force, was entered into in 1865 between the British Government of India and those two States, the principle provisions of which as regards imports are the following:—

(1) Goods produced or manufactured in the territory of any one of the three parties to the Convention pass free of duty into the territory of the other parties.

(2) Goods of foreign origin which have been imported into and paid duty to one of the parties to the Convention pass free of further duty into the territory of the other parties.

(3) Both of the States agree to adopt the British Indian tariff of import duties on goods of foreign origin imported direct.

The Convention applies to import duties on all commodities except tobacco, salt, opium and spirits, on which the States may, and do, levy their own duties. In view of the loss to which the States were subjected in giving up their right of levying import duties on goods taxed by or originating in the territory of British India or the other State, the Government of India pays compensation of Rs. 40,714 per annum to Travancore¹ and Rs. 1,00,000 to Cochin State.²

¹ The average amount of customs collected at the time of the Interportal Convention was Bh. Rs. 53,218 and the British Government has guaranteed this amount up to Bh. Rs. 40,000; that is to say, when the Travancore sea customs collections (on the imports from foreign countries excluding goods imported by sea for the Darbar's own use) are less than Bh. Rs. 13,218, the British Government pays to Travancore Bh. Rs. 40,000; but if, in any year, the collections exceed Bh. Rs. 13,218, the British Government deducts the excess amount from the sum of Bh. Rs. 40,000 and pays the balance only to Travancore. *Administration Report of Travancore State, 1916-17, p. 26.*

² And a further Rs. 10,500 in consideration of the Darbar having also surrendered its right to levy an import duty on tobacco.

As regards exports from Travancore State, the duty that the Darbar can levy cannot exceed 5 per cent *ad valorem*, except in the case of timber on which the duty may go up to, but should not exceed, 10 per cent. The Darbar generally follows the British Indian tariff valuation, but it recognises no restriction, such as that the export duty can be levied only on the articles that are so dutiable in British India. In all, export duty is now levied on 16 articles, of which the most important are copra, coir, cocoanut oil, cocoanuts, tea, pepper, dry ginger, jaggery, salt-fish, areca nut and tamarind, the first four being the produce of the cocoanut tree.¹

The export duties of Cochin State are those of the British Indian tariff with addition of a few others; but they are less important than the export duties of Travancore. Cochin, in addition to the guarantee of Rs. 110,500 receives half of the import and export duties collected at the port of British Cochin—an important source of revenue.

The import trade of the ports of Travancore and Cochin direct from foreign countries is small, and the yield of the customs collected thereon at British rates is small—usually less than Rs. 20,000 in each case, though perhaps it has increased last year.

The customs revenue of Travancore is an economic curiosity, being collected almost entirely by export duties. The figures for 1915-16 and 1916-17 were:

¹ *Ibid.*, p. 26.

			Receipts from Customs Travancore State	
			1915-16	1916-17
			Rs.	Rs.
Export duty	...	...	12,33,107	13,97,150
Import duty collected at the customs houses	...	...	69,305	73,620
Amount received from the British Government under the Inter- portal Trade Convention	...	...	40,714	40,714
Receipts from miscellaneous items			7,509	7,138
TOTAL Rs. ...			13,50,635	15,19,322

This lopsidedness is the result of the Interportal Trade Convention which provided for a fixed income in place of what would have proved a growing source of revenue; but without doubt the State has benefited economically by the freedom of import trade.

In the case of territory lying beyond the land frontiers the practice is to consign goods of foreign origin through in bond free of duty from the port of entry (usually Calcutta or Bombay) to a point at some distance beyond the frontier. The procedure used is that of the drawback on re-export, and the goods in bond must reach certain defined stations in foreign territory, *e.g.*, Jammu, Srinagar, Muzaffarabad, or Alibeg. Goods for Leh in western Tibet also go free of duty through British India *via* Hoshiapur under Customs seal.¹ A new and important case in that of Mysore. I understand that the Government of India is considering a proposal of that State to open a port at Bhatkal on the Konkan coast and build a Railway there and that the State may be permitted to collect and appropriate customs duties at British Indian rates on goods consigned through to its territory from abroad.

¹ For particulars regarding Kashmir, and the Hoshiapur-Leh route see *Standing Orders of the Calcutta Customs House*, Vol. I.

Principles Involved

Our survey of the practices in foreign countries earlier in this paper led to the conclusion that it is the accepted principle throughout Europe and America, and the vast African territories governed by the European powers, that the incidence of customs duties should fall on the subjects of the Government which realises and benefits by those duties. Another way of stating the principle is that since the incidence of customs duties is, in the case of imports, mainly (when not wholly) shifted to the consumer, and in the case of exports falls largely or wholly on the producer, duties should be levied only in such manner that the taxes may be utilized for public expenditure in the territory where the incidence falls. This theory cannot be realised perfectly in practice; but it is very clear that all taxes in the nature of transit duties are a direct contravention of it.¹ The Government of India has joined in the universal condemnation of transit duties, and has wisely secured the abolition of all such duties which were formerly levied by Indian States on goods passing through their territories to other States of British India.

Yet the sea-customs levied by the Government of India at the ports on goods passing to inland States certainly are transit duties on such goods as arrive from abroad and are despatched to any inland state for consumption, when, as in the great majority of cases, the imported goods undergo no process of manufacture in their passage from the landing wharf to the State territory. They are transit duties because the duties collected are credited wholly to the Treasury of the Government which collects them—British India—and not at all to the country of origin outside India or the country of destination, namely

¹ As regards incidence of transit duties, see Bastable, *Public Finance*, Book. IV., Chap. vii, Section 7., 3rd ed., p. 571.

the Indian State. Thus the incidence of the British Indian customs falls upon the whole population of India—upon the peoples of the Indian States (with a few unimportant exceptions) as well as on the subjects of British India. Many of the States levy their own customs duties on goods passing their frontiers both inwards and outwards whether the surrounding territory be that of other States or of British India; and the people of such States having their own import and export tariffs have to bear the double burden of State duties and British Indian duties on all goods coming from abroad, and on such of their produce as the Government of India may choose to impose export duties, *e.g.*, hides.

The position is, therefore, that the principle universally recognized elsewhere, that the incidence and benefit of any particular customs tariff, should be confined to identical territory, is not acted upon in India. The populations of the States are taxed in aid of the revenues of British India; and any benefits which they may receive from the Suzerain Power which appropriates the sea customs are either a necessary consequence of the existence of that Power, or are an arbitrary gift of its free will, and not in any constitutional sense a *quid pro quo* for the burden thrust upon them. Those exceptional cases of the maritime and transfrontier States which are relieved of a part or the whole of the incidence of the British customs affect a population so small as to be almost negligible—less than two per cent of the whole population of India. Yet the very existence of these exceptions due to old treaties destroys the completeness and symmetry of the present system—its only possible merit—and is wholly repugnant to modern ideas of inter-state commercial relationships.

*Methods of Participation by States in British
Indian Customs*

If the validity of the foregoing argument be admitted the question arises as to whether the States should be entirely excluded from the operation of the British Indian customs, or whether some arrangement should be made whereby each State would be entitled to some share of the revenue collected by the Indian customs administration. This subject was discussed by Rao Bahadur M. V. Kibe, Commerce Minister of Indore State, in a paper which he read before the last Conference of this Association at Madras.¹ He suggested five different methods whereby the States might receive justice as regards the incidence of the sea-customs; and these I may first recapitulate in a slightly different order, adding comments of my own. His first method was to allow goods coming from foreign countries by sea consigned through to a destination within one of the States to pass the British customs at the port of entry free of duty. The packages would be forwarded by rail in bond under seal of the British customs officers, the railway being under obligation to deliver with seals unbroken at the designated customs station in State territory, where the State would presumably levy its own duty. This follows the precedent of Switzerland, Bolivia, and many other countries. The difficulty is that the States would be bound to levy duties on foreign goods arriving in bond at the appointed stations at rates *not less than the British Indian customs tariff*; otherwise it would be necessary for the Government of India to establish a chain of customs Stations and guards completely encircling the State on its land frontier. The latter alternative would be so costly and harassing that it is unworthy of consideration.

¹ See *Proceedings of the Third Annual Conference of the Indian Economic Association, 1920, pp.184-9.*

Two other methods suggested by Mr. Kibe are in essence no more than variations in the procedure of the first. Instead of the British customs officials forwarding the goods under their seal, each State might be allowed to acquire a strip of land at the port on which to erect its own warehouse where goods would be taken into bond by customs officers of the State service and forwarded under their seal; or each State might simply rent a portion of an existing bonded warehouse for the purpose. The advantage of this is that it would allow the breaking of bulk and subdivision of consignments received from abroad by merchants of the port town. The State officials would collect at the port docks the State duties on the packages to be consigned under their seal to State territory, and British duty would be paid on the part of the consignment not entered into or retained in the State warehouse.

The other variant is to utilize the system of drawbacks already in use for re-exports and for the consignment of goods to Kashmir. The merchant having paid the British customs duty at the port of entry to the British customs officers would have it refunded on taking delivery of the goods at the appointed customs station within State territory. This method would involve unnecessary and troublesome transactions; because merchants having regained the British duty paid would have to pay the State duty, which could not be less than the British duty. Consequently the British Customs authorities might just as well hand over the duties collected direct to the State to which the goods were consigned. This is in fact one of Mr. Kibe's proposed methods. The procedure would be for the British Government to collect at British ports customs at British rates on all goods consigned direct from abroad to a place within the State, and

conversely an export duty on goods consigned from the State to any foreign country. The amount so collected would be paid to the State Government, after deduction of 5 per cent for cost of collection. This will be recognized as the method formerly in use in South Africa, which was discarded in favor of the South African Customs Union in which each State and Protectorate receives a fixed share of the total collections.

The method of the customs union is the fifth and last of the possible methods of meeting the situation in India. As Mr. Kibe puts it, the collection of customs would continue as now, but the British Government would pay over to each State a share of the whole customs revenue. Mr. Kibe does not, however, favor the adoption of this method; but would prefer the method of drawbacks, or the collection of duties on behalf of the State Governments on the goods specifically consigned to their respective territories. His reason is that the volume of foreign trade "may be taken as a reliable index of the economic development of a State".

It is apparent at once, however, that the adoption of Mr. Kibe's proposal would involve the loss of customs revenue on goods first consigned from abroad to a point in British territory and then reconsigned to a place in State territory. The only way of avoiding this loss to the States would be by establishing a very complicated system of drawbacks on goods from a British territory to State territory and *vice versa*. This would reproduce in India the state of affairs which existed in South Africa from 1906 to 1910, which proved so troublesome that it was superseded as soon as possible by the Customs Union; but in India, having regard to the large number of States, the trouble and confusion would be far worse.

The States, therefore, could only expect to be credited with the duties collected on goods actually

consigned through to their respective territories from abroad. This would mean that those States which have no entrepot business, and no facilities for importing direct from abroad, would gain nothing by the change. It is true that it would stimulate States to organize amongst their merchants the direct importation of foreign goods; and if any of them were very successful in this they might establish distributing centres which would supply neighboring British territory, and thus trench upon the revenues of British India. The complications of this method are so numerous that I prefer to advocate the last-mentioned method of allotting to each State a share of the general customs revenue of British India, in which would be included the customs revenues collected by the maritime States which now have special privileges. The question of how the share of each State should be determined now remains for discussion.

Basis of sharing the Customs Revenue

In the German Custom Union the division of the total customs revenue amongst the various States was determined upon the population basis; but the circumstances are so different in India that the application of this method would have unfair results. In Germany, at the time of the formation of the Union, the various States were, broadly speaking, approximately at an equal stage of economic development. The reverse is true in India. Not only is there the greatest divergence between the economic development and earning power of the people in different parts of British India: there is an equally marked difference between the various States. In some of them agriculture is more productive than in most: for example, in Gwalior and Patiala extensive irrigation systems have been introduced. Some of the States are far

more advanced commercially and industrially than others, and with this development has come a higher standard of living and the spread of education, which in a few States is compulsory. Baroda, Mysore, Travancore, Indore, Gwalior and Patiala are well-known as advanced States; and the taxable capacity of their peoples, and the cost of their administrations per head of population are far in excess of those of more backward States like those of Rajputana, or the Eastern States of the Central India Agency. On the population basis, therefore, the backward States would receive revenue not earned by their commerce, or by the consumption of foreign goods by their people; and the advanced States would have less than their due.

The alternatives to the population basis are division in proportion to public revenues or to public expenditure. It may be laid down as a broad general law that the public revenues per head of population of various countries are roughly proportional to the stage of economic development which the countries have reached; for an advanced commercial and industrial system necessarily involves a more costly administration, whilst amply providing the capacity to pay taxes to meet the expense. Throughout the world this is true if the cost of making war, and the burden of war debts be eliminated.

In Western countries public revenue and expenditure are normally so nicely balanced that it would be immaterial which was chosen as the basis of division. Amongst the Indian States, however, this is far from being generally the case. In nearly all States revenue rarely falls short of expenditure, except in years of severe drought; but in some of them revenue greatly exceeds expenditure. This is true even when we include the Ruler's personal and "palace" expenditure—his "civil list"; but it is still more strikingly true, if

that be omitted and the cost of the public administration only be treated as the expenditure of the State.

There are difficulties in every solution which can be suggested; but my own inclination is towards the adoption of a distribution in proportion to expenditure on the public administration, including the state army and contributions to Imperial defence and war expenses. A settlement for five years could be made on the percentage which the annual public expenditure of each State, during the preceding four years, has borne to the whole expenditure of all the States and British India, including the Provincial governments, but excluding local authorities. Every five years a new settlement could be effected on the basis of the average annual expenditure of the preceding four years.

Financial Aspects

If the States are to receive a just share of the sea customs revenue, they may fairly be asked to contribute their quota to the expenditure of the Indian Government from which they benefit. The defence of India from external enemies is the only important item in this category. In the absence of any better criterion we may assume that half the military expenditure is for the maintenance of internal order and half for defence of the land frontiers. The Budget for 1920-21 provided Rs. 59½ crores (converting expenditure in England at 1s. 8d.) for military expenditure, which is probably close to the normal figure of the future. The revenue from sea and land customs seems likely to expand to about 30 crores in the near future; consequently the debit of each State for Military expenditure and its credit for customs revenue will about balance, if both be shared on the same basis. The States might have some small immediate gain; and if a new policy should augment the customs revenues of India their advantage would automatically increase.

DISCUSSION OF PAPERS ON INDIAN PUBLIC FINANCE

MR. DEOLE said that they could no longer keep economics out of politics as the two subjects were mixed up closely. He did not know where the Indian states stood in Indian politics in regard to the question of customs revenue.

MR. GYAN CHAND said that in considering the question of the fiscal policy of India, they had to bear in mind the haphazard way in which the system had grown and the stage of the social consciousness of the people. In his opinion it was desirable to effect a complete separation of the revenues of the Central and Provincial Governments in order to ensure a continuity of financial policy. But it was desirable that the Central Government should, as a rule, budget for a surplus in order to help the provinces with limited resources. He advocated the reduction of the military and civil expenditure as the only way of providing funds for the service of public utilities which had been starved till now. The new sources of revenue which could be tapped were very few and would remain so for a number of years.

MR JOSHI denied that customs was not a very dependable item for the central Government. In his opinion income-tax should be among the sources of income of the central Government. Education, sanitation and industry would be the three great subjects which would be placed under the new Provincial Ministers, and they would require money. How to secure it to them should be the guiding principle in the settlement of the financial relations between the central and provincial governments. Mr Joshi proceeded to criticize the recommendation of the Meston Committee and advocated contributions by the central to the provincial governments, since the former retained all the expansive items of Indian revenue and saddled the provinces with all the expansive items of expenditure—contributions indeed; but such were needed in exactly the opposite direction to that of the Meston report. He then touched on the question of military expenditure; and was surprised at

Mr. Sahani's assumption that the Indian military expenditure was designed solely for frontier defence and that it should be curtailed. Until the army expenditure, he added, was cut down to a reasonable figure, no money could be found for anything and no new era could dawn in education or sanitation.

Mr. THAKORE (Deccan College) said that finance was not a branch of pure economics, but a branch of practical statesmanship and administration. It depended upon external policy and more often on circumstances and considerations which were extraneous. The views of economists as such counted for little in these matters. He illustrated his point by saying that Government had to find funds by raising loans either inside or outside the country and enough current income for the purpose of developing industrial and other branches of administration. He favored reduction of the salaries of the men at the top in various services and said that ministers in Japan and Canada were paid only Rs. 1,200 and Rs. 1,500 respectively, whereas in India they were paid five or six thousand. The subordinate and intermediate ranks were getting starvation wages while the men at the top were overpaid. Coming to the external policy he said that the Indian army was far too costly for a poor country like India. To make it cheaper and efficient they ought to Indianise it, and the best way of Indianising it was in the direction of Provincializing it. In conclusion, he said that the reorganization of finances between the central and provincial governments now entered upon would necessitate a complete and thorough overhauling of the whole subject in every detail.

MR. KANUNGO said that it had been suggested by Prof. Jevons that in the past customs revenue was not much and there might be justification for the Government of India in not allowing native states to have their share of the customs revenues, as the same might be considered as a charge on the Indian states for the security afforded by *Pax Britannica*. He did not agree with that view. If Prof. Jevons meant security for the due transit of goods then the Indian states might as well charge for the security they afforded to the goods in transit through their dominions. He did not believe the Government of India could reasonably put forth the plea that they should retain that share for the

security they afforded. If the Indian states had had the courage to protest then and there, it would have been stopped long ago. But owing to the disorder then prevailing in the native states they did not do so. Now when they were enjoying peace and order and were anxious to find ways and means to effect improvements in their territories they naturally turned to a source of revenue which was really theirs, though it accidentally happened to be in the hands of the Government of India.

The CHAIRMAN said that he did not think that the the problem of Indian finance could be satisfactorily solved by the reduction of salaries of the men at the top, as far more than what could be saved from the excessive salaries at the top would be required to pay the intermediate and lowest ranks. Coming to the question of reduction of military expenditure they had to remember that the greater part of the defence of India was being carried out by the British navy, the entire expense of which was borne by the British Government. It was only proper that the adjustment should be mutual if India was to benefit by the defence of the navy.

Mr. SHAHANI replied briefly.

PROFESSOR THOMPSON in reply said that he was glad to find himself in substantial agreement with Professor Shahani, except in the matter of the income tax. He agreed with Dr. Slater that it would not be possible to reduce the revenues of India, for while higher salaries would decrease lower salaries would increase. It was found that as countries became more democratic the higher officials were always paid more. The total would probably be greater.

We should not look upon the wealth of the country as fixed, but as a growing amount whose growth depends largely upon the beneficial activities of Government. The taxes which we take for education will increase our wealth by far more than the amount of these taxes. We should have a progressive point of view and believe there is going to be economic progress. But we should give each local government sufficient independence and responsibility for the progress of its people by separating the sources of taxation; and we should make the burden as light as possible by equalizing the rates, of taxation, especially as between agricultural and non-agricultural incomes.

Second Day.—Thursday, December 30th, 1920
Morning—

A SUBSISTENCE WAGE

PROFESSOR H. W. LYONS
INDORE CHRISTIAN COLLEGE

The following study of the economic position of the laboring classes of Indore, and the attempt to determine a subsistence income or poverty line—as distinct from an existence wage—has been made with the assistance of undergraduate students in the Indore Christian College. The line of enquiry has been as follows:—(1) the selection of a standard of food and clothing; (2) the determining of the cost of this standard for an average family over a period of years, and the comparison of the result with the wage income possible under the rates of wages prevailing during the years; (3) the examination of the economic position of actual families during the month of November just passed, judged by the standard selected.

A Subsistence Standard

In any country the jail should form a standard of living below which the condition of the free man should not fall. If it does not do so, then in times of economic depression the jail stands as a menace to the community, and not as a means of protection for the private property of the citizen. It was to the jail manual, accordingly, that I first turned to determine the minimum of food, clothing and house room which should be available for working families. It is that standard which I have finally selected,

not only because of these social problems involved, but chiefly because it is a standard arrived at some years ago by experts, and tested by experience. It is based upon the principle of keeping the individual fit to work, at the same rate as he would be at liberty, and it was determined by careful food analyses and experiment.

The provision for food, clothing and house room, as laid in the United Provinces Jail Manual, which is followed in the Central India Jail in Indore, is as follow:—

A.—Food

Scale. I.—For male prisoners, laboring:—

Nitrogen 210; Carbon 5268.7.

Day of week	Cereal Pulse Combination	Dal	Vegetables	Oil	Chilli No.	Salt	Fire wood
Daily	14 Ch.	1 Ch.	3 Ch.	4/25 Ch.	1	150 Grains	5 Ch.

The cereal-pulse combination is invariably to be made up according to the following table:—

Principal		Adjuvant	
GRAIN	QUANTITY	GRAIN	QUANTITY
Wheat	11 Ch.	Barley	3 Ch.
Bajra	12 „	Pulse	2 „
Makka	12 „	Pulse	2 „
Wheat	11½	Gram	2½
Juar	11 „	Pulse	3 „
Barley	11 „	Wheat	3 „
Rice	10½	Wheat	3½

Scale II.—For working women, and juveniles arrived at puberty:—

Nitrogen 210; Carbon 4588.7

The scale is similar to Scale 1, except that the Cereal-pulse combination is 12 *chhitaks*, which may be made up as follows:—

<i>Principal</i>		<i>Adjuvant</i>	
GRAIN	QUANTITY	GRAIN	QUANTITY
Bajra	12 <i>Ch.</i>	None	
Makka	12 „	None	
Marua	8 „	Wheat	4 <i>Ch.</i>
Wheat	12 „	None	
Juar	7 „	Wheat	5 „
Barley	7 „	Wheat	5 „
Rice	6½ „	Wheat	5½ „

Scale. III.—For non-laboring adults; juveniles no arrived at puberty; and under trial prisoners:—

Nitrogen 182; Carbon 3908.7

The scale is similar to Scale I except that the Cereal-pulse combination is 10 *chhitaks* which may be made up as follows:—

<i>Principal</i>		<i>Adjuvant</i>	
GRAIN	QUANTITY	GRAIN	QUANTITY
Bajra	10 <i>Ch.</i>	None	
Makka	10 „	None	
Marua	8 „	Wheat	2 <i>Ch.</i>
Juar	7 „	Wheat	3 „
Barley	7 „	Wheat	3 „
Wheat	10 „	None	
Rice	5½ „	Wheat	4½ „

The wheat to be used in all cases is second quality, or 'red' wheat.

For children under two years of age confined with their mothers the ration is as follows:—

(a) To nursing mothers two *chhitaks* of wheat atta and half a *chhitak* of ghee in excess of the ordinary laboring ration.

(b) To children between 12 and 18 months; six *chhitaks* of milk, two *ch.* of rice; and ½ *ch.* of dal.

- (c) To children between 18 and 24 months; 4 *ch.* of milk 4 *ch.* of rice, and $\frac{1}{2}$ *ch.* of dal.

B.—*Clothing*

The scale of clothing for a year is as follows:—

1. *Male*.—2 jangia; 2 shirts; 2 langote; 1 summer blanket, and 2 winter blankets; 1 blanket coat for winter; 2 beddings of tat patti, 6 ft. by 2 ft.

2. *Female*.—3 langah; 4 kurti; 2 chadar; 2 beddings of tat patti; 6 ft. by 2 ft.

It is expected that these outfits will last only the year, with the exception of that blanket coat and blankets. However, in estimating the requirements of a family later I have followed the time honored custom of clothing the children with their parents' cast off garments, thus adding nothing to the family expenditure on clothing for them.

C.—*House Room*

In calculating Jail sleeping accommodations, a minimum of 36 square feet of superficial area, and 648 cubic feet of breathing space is adopted. Under no consideration is less permitted, nor does an increase in height permit a decrease in the floor space. When one thinks of the chawls of factory districts, or the houses of the gwalas and their cattle, one has some conception of the magnitude of the problem confronting a housing association which would aim at forcing landlords to treat their tenants at least like prisoners.

The Cost of the Standard

It is obvious that the Jail standard of air space must be neglected, substituting therefor the scale of rents actually paid by the class of workers we are considering,—unless indeed we consider that the open chinks in the roofs and the unlimited air space upwards gives us the required volume! At present rents run from Rs. 1-8-0 to Rs. 2-8-0 depending upon the size and condition of the house.

The present cost of the full supply of clothing for a man and a woman is Rs. 24 for a man, and Rs. 37-12-0 for a woman, provided that the warm blankets and blanket coat are of the second hand army material now found in almost every bazaar. This gives an average monthly cost is Rs. 2. and Rs. 3-2-2 for a man and a woman respectively. The cost of clothing has been increasing and in November was approximately two annas in the rupee higher than a year ago. Beyond that I have been unable to secure accurate figures. However, as the expenditure on clothing would be less than one-fifth of the total expenditure required to reach jail standard,—when we use cast-off clothing for the children—an examination of the cost of food in its relation to income will give us fair accuracy a picture of the economic position of the worker over a period of years.

The prices in the Indore Market of the various food combinations possible in the several scales have been ascertained since 1902 with a view to discovering the cheapest. The figures upon which the tables are based were taken from the tri-weekly records of prices kept by the Bazaar Office. These recorded have been averaged for the four months from October 21 to February 20, partly to overcome fluctuations which might occur because of exceptional circumstances; and partly because the cold season, when trade is unrestricted by climatic conditions, forms a convenient basis for comparison of succeeding years.

With the exception of November of this year, the cheapest cereal-pulse combination has invariably been wheat and jowar, or jowar and pulse. It accordingly has been adopted, despite the fact that amongst many of our people the making of jowar chapatties is rapidly becoming a lost art because of the difficulty and tediousness of preparation. Wheat, the aristocrat amongst the cereals, is preferred. In November of this

year Jowar was not in the market, and wheat only could be secured at from 5 seers 6 *ch.* to 5 seers 10 *ch.* per rupee. All workers accordingly, were compelled to purchase it.

For a workingman's family of five members, which provides for the renewal of the force of labor with one additional—in which the man and woman and eldest child all work, leaving only a dependent minor and a baby as non-producers,—the cheapest food combinations¹ on jail standards since the cold weather months of 1902-03 have totalled as follows per month:—

	Rs. a. p.		Rs. a. p.
1902-03	8 13 1	1911-12	10 5 7
1903-04	8 9 0	1912-13	11 7 1
1904-05	9 4 11	1913-14	12 1 6
1905-06	11 15 7	1914-15	12 15 10
1906-07	10 11 10	1915-16	13 0 11
1907-08	14 7 2	1916-17	11 4 11
1908-09	13 14 0	1917-18	14 15 9
1909-10	10 7 6	1918-19	18 6 5
1910-11	10 0 8	1919-20	22 0 11

Nov. 1920 :— Rs. 25-7-3.

During the same period of time the rates of daily wages for laborers under steady and continuous employment, as taken from actual sheets, have been as follows:—

	Man	Woman	Boy or girl
From 1902-1913	0-4-0	0-3-0	0-2-0
1914 :—	0-5-0	0-3-0	0-2-6
1915-1919 {	0-5-0	0-3-6	0-2-6
	0-6-0		
1920	0-7-0	0-4-0	0-3-0

¹ The combinations are :—

Man—Scale 1; Jowar 11 *ch.*
Pulse 3 *ch.*

Non-working child—Scale 3;
Jowar 7 *ch.* Wheat 3 *ch.*

Woman and working child—Scale 2; Jowar
7 *ch.* Wheat 5 *ch.*
Baby—Scale for child 12 months and 18
months.

Based upon these rates, and assuming that the three workers work for a full month of 28 working days—which is probably two days over the average—the total possible monthly wages income of the family would be as follows:—

	Rs. As. P.
From 1902-03 to 1913-14	15-12-0
From 1914-15	19-4-0
From 1915-16 to 1918-19	21-0-0
From 1919-20	24-8-0

The ratio accordingly of expenditure necessary for food of jail standard to the total possible wages income of the family would have been as follows:—

	per cent		per cent
1902-03	55.9	1911-12	65.5
1903-04	54.4	1912-13	72.5
1904-05	58.7	1913-14	76.5
1905-06	76.0	1914-15	67.2
1906-07	67.9	1915-16	61.9
1907-08	91.9	1916-17	53.6
1908-09	88.0	1917-18	71.4
1909-10	66.0	1918-19	87.6
1910-11	63.4	1919-20	89.9

November 1920:— 104.0 per cent

Had jowar been on the markets at last cold weather's prices the November cost of food would have been Rs. 21-4-4; making the ratio of food to wages 87.8 per cent.

Despite the increase in wages it is apparent that the economic condition of the laborers is more critical than at any time during the past twenty years. In 1907-08, during the famine which visited Central India, it is true the ratio of food cost to wages was 91 per cent. But it dropped the next year and the third year was more or less normal. For the past three years, however, the ratio has been rising steadily, and

a downward movement in the all-important cereal-pulse combination has not yet started.

We may now ask: What should be the subsistence income to-day for an average workingman's family such as we have taken under existing conditions? The total necessary monthly expenditures, exclusive of any allowance for lighting, medicines, charities, education etc. I estimate as follows:—

Food	Rs. 25-7-3 (wheat) or Rs. 21-4-4 jowar at 1919-20 prices
Clothing	Rs. 5-2-2
House rent	Rs. <u>2-0-0</u>

Total Rs. 32-9-5 or Rs. 28-6-6 if jowar becomes available.

That is the family income must average, with 28 working days per month, from Re. 1 to Re. 1-3-0 per day. And that income must all be expended on necessaries, leaving none for the toddy of which many workers all too fond. This should prove a sobering thought to these who see no harm in the licensed toddy shop in working class districts.

But, while the family income should have averaged during November Rs. 1-3-0 per working day, the actual wages income under the most favourable circumstances was as a fact only annas 14 per day. That is the family during November last were receiving As. 5 per day, or 26 per cent less than the actual subsistence wages. If they had put the second child to work and could have been able to do without the luxury of the baby, they would just have attained to the jail standard. I sometimes wonder whether the Indian labor, if he were aware of these facts, would agree most heartily with Shakespeare that "Stone walls do not a prison make, nor iron bars a cage."

Some Actual Families

Thus far we have been considering what might be in an average family impelled only by the laudable

economic motive of attaining to a subsistence standard, and unhindered in its struggle by accident or sickness, by inherited debt or dependence, or any ambition to lift the children out of the treadmill of labor. Let me give a group of actual cases collected from amongst the workers of Indore. I shall give the standard as (a) the actual cost of the wheat combination in November, 1920; and (b) the cost as it would have been if jowar had been on the market. The income is estimated at full time wages.

1. Family of four:—(Postal Peon): working man; working woman; working boy of 12 years; boy of 8 years. Cost of standard (a) Rs. 29-2-11 or (b) Rs. 24-15-2. Actual family wage income Rs. 40-0-0.
2. Family of three:—Working man; working woman; child of 5 years. Cost of standard (a) Rs. 23-2-25; of (b) Rs. 19-15-0. Actual family wage income Rs. 19-0-0
3. Family of four:—Working woman, and three children aged 8, 6, and 4 years. Cost of standard (a) Rs. 24-11-5 or (b) Rs. 17-8-8. Actual wage income Rs. 7-0-0.

This woman has mortgaged the property her husband left her at his death to the sawkar.

4. Family of five:—Working man and woman and boy of 16 years; two smaller children. cost of standard (a) Rs. 34-10-2; or (b) Rs. 29-5-4. Actual family wage income Rs. 27-0-0.
5. Family of five:—Working man and boy of 12 years; dependent woman and two children. Cost of standard (a) Rs. 33-6-1; or (b) Rs. 28-2-2 Actual wage income Rs. 17-12-0.

6. Family of four:—Working man; dependent wife, son of 18 years, daughter of 15 years. Cost of standard (a) Rs. 27-13-7; or (b) Rs. 23-6-8. Rs. 11-0-0 extra income Rs. 9-6-0; total Rs. 20-6-0.
7. Cartman's family.—Working man; dependent woman and two children. Cost of standard (a) Rs. 27-13-7; or (b) Rs. 23-6-8. Wage income at Rs. 1-8-0 per day Rs. 39-0-0.
8. Family of eight:—Three working men; three dependent women, one child of 7 years and a baby. Cost of standard (a) Rs. 60-2-1; or (b) Rs. 52-11-0. Actual wage income Rs. 54-0-0.
9. Family of three:—Working man and woman; one baby. Cost of standard (a) Rs. 22-3-1; or (b) Rs. 20-0-10. Actual wage income Rs. 17-0-0.
10. Family of three:—Working man; dependent woman and child of 4 years. Cost of standard; (a) Rs. 22-15-0; or (b) Rs. 19-13-2. Actual wage (at 8 annas) Rs. 14-0-0.
11. Family of eight:—Three working men; two dependent women and three children. Cost of standard. (a) Rs. 59-7-3; or (b) Rs. 49-15-0. Actual wage income Rs. 36-12-0.

Conclusions

From the statement of these cases, and from the examination of our average family of five members, I draw certain conclusions:—

1. The average daily wage income needed to provide adequate subsistence for a family of five

on a wheat standard must at present be at least Rs. 1-3-0, and on a jowar standard Re. 1-0-0.

2. This standard even in the most favorable circumstances is not being reached by the laboring classes of Indore at the present time, although it has been surpassed at various times during the past twenty years.
3. In the same position as the laboring classes are the great majority of servants; and all manual laborers except the skilled craftsmen and the better paid workers of the cotton mills.
4. This subsistence standard cannot at present be fully attained by the laboring classes under existing rates of wages—nor has it been reached since the commencement of the war—as long as there are dependent children or women in the family. To secure it every member must work without loss of time. This is particularly apparent from an examination of cases 2, 4, 9 and 10.

I have not been able to follow out as yet interesting lines of investigation which these facts suggest, and more particularly their influence upon the birth and death rates, and upon petty crimes against property. Nor do I wish to point to certain obvious lessons, such as the fundamental problem underlying the work of social and educational reform, in fact all work for the amelioration of the condition of the masses. I wish merely to present the results of our investigations thus far completed along these lines, and to ask for your suggestive criticisms.

LABOR UNREST IN INDIA

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This paper represents the result of a personal inquiry, conducted under the direction of Prof. H. Stanley Jevons, into conditions of work and pay in a number of factories, and into the underlying causes of some of the recent industrial disputes in India.

No one will have the hardihood to deny that the form which the labor problem assumes will affect most deeply the material and moral planes of our existence in the future. It is, in fact, the biggest question facing modern civilisation.

But the gravity of the situation in India has been persistently belittled on account of the comparative inferiority of its industrial labor in point of numbers. It may be contended that as a matter of fact town populations have always played the most prominent part in shaping the history of a country. Apart from this it can be amply demonstrated that, viewed from whatever standpoint, whether the number of strikes, their aggregate duration and the number of workmen involved on the one hand, or the strength of feeling exhibited in the course of the disputes on the other hand, the unrest in this country is acute and widespread. In the first two months of this year, 1920, the cotton and

jute industries alone experienced some 110 strikes, involving about 2,475,000 workmen. Taking account of the principal disputes only, there were in October last about 38 strikes, besides two lock-outs, affecting some 1½ million workmen¹. Of general strikes too we have not a few. The North Western Railway strike of April last; the Cawnpore strikes which began in November, 1919, and extended right into March of this year; and the recent Ahmedabad affair which affected 29 mills at once, were, considering the stage of labor organization in India, affairs of no small importance.

I personally know of a number of strikes which were never reported to the press. Our present statistical data is, therefore, necessarily incomplete. As a measure of the prevailing unrest, at its best, it is very inadequate. It says nothing of the large and growing volume of discontent which lies concealed from public view because, for lack of opportunity, it cannot express itself in the shape of strikes. It may be called Invisible Unrest. As the Right Hon'ble Charles Booth observes in his "Industrial Unrest and Trade Union Policy," we must estimate the existing unrest not be the statistics of strikes, but by the degree of divergence of ideas, by the width and the widening of the chasm disclosed." Indeed, it is the ideas, the mood and the temper of the workmen which signify most. Generally we may say that the Indian workman is at present in a very sulky and irritable mood. For an accurate measurement of the magnitude of the invisible unrest an intensive inquiry in each industrial centre is indispensable. All the factors in the local situation: for example, retail prices, wages, indebtedness, education, profits of the local industry, relations between the employer and the

¹ The above statistics have been gathered by searching the principal newspapers in India for accounts of strikes. There must have been many disputes which passed unreported or unseen by me.

employee, ought to be studied in detail.

Further, one can very easily perceive from the figures how appalling is the loss sustained by both the strikers and the employers. The greater part of the loss cannot be measured in money. For the Indian laborer, a strike always means utter demoralization in the event of failure; an exaggerated sense of his own importance, and consequently more strikes on trivial grounds, if he succeeds; disquiet and worry in both cases, while it lasts.

This is not all. The strikes introduce an element of insecurity into industry which acts as a fearful drag on progress.

Nature and Form of the Unrest

Labor in India, is no doubt a problem, but not in the same sense as it is in England. The workman here fights for small concessions and more humane treatment, while his brother there is standing up for large principles and political domination also. Class hatred and class consciousness form an integral part of the British and American laborer's creed, but these sentiments do not sway the workmen in India to any large extent. The distinction is important. Steps which would prove ineffectual in England and America now, may fully meet the situation here, provided they are taken in time.

Another distinction is that for several years to come, we cannot dissociate the industrial questions from the political movements of the country. The political agitator knows that a powerful army of town laborers would be an asset of no mean value to his cause. Labor here has plenty of grievances, but it is yet too early to expect its own ranks to supply a sufficient number of men who are able to take the lead in the inevitable struggle with

capitalistic management. The existing leaders are recruited from the educated middle classes which have no dearth of people with little personal experience of the life of the laborer, little association as a rule with the conduct of industry in any form, but possessing a good deal of intellectual sympathy with the cause of oppressed labor. These people have their political views no doubt. The recent Trade Union Congress held in Bombay was a grand conference of such as these. This adequately explains the unpractical character of the proceedings of that body. It also shows us how a proportion of the unrest is artificial in some degree.

The laborer is not directly obsessed with any political theories. He notices the current of political life only when it touches himself, and then he leaves it with praise or silent condemnation of the Government. The masses attribute every good or ill to the Sirkar. The present economic distress therefore can easily be exploited for political propaganda. These facts lend a color of truth to the allegation made by the Government that many of the strikes have a political background.

Passing to the conduct of the strikes, we note with satisfaction that we have yet had nothing to compare with the series of outrages perpetrated in England during the Cambrian Combine strike of 1910. Mr. D. Evans in his book: *Labor Strife in the South Wales Coalfield* gives a harrowing account of the "frenzied and desperate attacks on property," the stones falling like hail "the many mêlées of the police with the strikers" and adds, "The agony cries of the injured, the sharp hissing clash of baton against pickhandle and other weapons, the sickening thud of skull blows and the howling of the mob maddened with rage is better imagined than described."

It cannot be denied, however, that in not a few

cases, we have repeated the ugly sequence of processions, assaults, rioting, police intervention, arrests, and convictions. We ought not to interpret this rowdyism as indicating anything beyond a disgraceful admission of the helplessness of their position. It does not at any rate denote an excessive discontent or intensity of unrest.

But it reveals as nothing else does so well, that the attitude of the public in this matter is, excepting a rare instance or two, either one of strict neutrality or that of active sympathy with the strikers. Public charity often carries them through strikes and enables them to secure an increase of wages if the economic conditions permit. It is for them to follow up their victory and lay the foundation of a strong union. They seldom do that. They rather break up what little organization has been improvised during the dispute. So it is that labor organizations play an insignificant part in these battles. Mention may be made here of two very noteworthy features of the existing situation. A strike is in western countries the last, while in India it is the first weapon of redress. Explanation lies in the almost complete absence of industrial courts, and of machinery for conciliation and arbitration. The lightning strike has come in for much criticism from the press and the public. Generally, it is preceded by complaints and memorials. The reason for inadequate notice is that, with no organization and no funds, the abruptness of assault is a distinct advantage.

So far a strike in India has ended almost as often in favor of the laborer as against him, while the number of compromises and cases of reference to arbitration committees are few and far between. The result of a dispute is of small moment, except as showing the relative economic strength of the parties. The

agricultural connection of the Indian laborer constitutes a factor in his economic strength, and is at the same time responsible, in part, for his present unsatisfactory position. The dread of unemployment consequent on a dismissal at the end of an unsuccessful strike is not so great in his case; but there is also absent the stimulus to press demands, and get grievances redressed by industrial action.

We are, in brief, facing a very chaotic situation. Without effective organization and without any mediating agencies, the industrial unrest in India is running its course without let or hindrance.

Causes

The following is an analysis of the ostensible causes of the strikes that were reported to the press in October of this year:—

	<i>Per cent</i> ¹
1. Wages or bonus only ...	33
2. Wages and other grievances ...	45
3. Dismissal of fellow-workers only and non-recognition of union ...	10
4. Dismissal and non-recognition and other grievances ...	15
5. Hours and other grievances ...	20
6. Purely sympathetic ...	4
7. Offences of officers and foremen ...	4

Industrial unrest is too complicated a matter to be reduced into percentages in this manner. Moreover the ostensible and the real causes are often at variance. The statements of the employer and the employees too are generally conflicting as to the origin of a dispute.

For a correct diagnosis, we must go below the

¹ Strikes reported due to two or more causes are included here under more than one head, which accounts for the total of percentages exceeding 100. [Ed.]

surface. Unrest has its origin in change, either : (1) in the material condition of life, or (2) in the mental and moral outlook of the worker.

(1) Actual economic distress is easily the first in the list of the causes of unrest. The Indian worker has never been credited with the capacity to save. The ideal wage for him has all along been the sum which could just keep body and soul together. In practice the errors were never on the side of excess.

The war immediately caused a serious dislocation in the machinery of production and distribution throughout the world, and set prices on their upward curve. Prices rose, but the wages lagged behind as they always do. The Indian laborer, with his low standard of living had no margin above the barest necessities of life on which retrenchment could be tried. He had no past accumulation to draw upon. Prices went on rising, but the men got no increases except a grain allowance here and there, the obvious reason being that the employers feared that with the reversal of the trend of prices it would be very difficult to bring about a corresponding diminution in wages. In fact, nobody knew when the war would end and economic conditions change. The laborer went on sinking into the morass of indebtedness, which further reduced the purchasing power of his nominal earnings. There is an end to human patience, even to the proverbial patience of the Indian laborer. There may be some difference of opinion as to the extent of the rise in the cost of living. No such difference is possible on the point that labor in India was very much worse off at the close of the war than it was at its beginning. The pent up discontent burst out in the shape of strikes and threats of strikes. Concessions followed. Viewed as a whole.

wages have seen an average increase of about 50 per cent. No wonder that unrest has not ceased!

Housing, hours, and the numerous petty details of management routine, have a subordinate roll. Their peculiar importance arises from their indirect effect on the tone and temper of the laborer's life. On account of long hours, and insanitary dwellings, the Indian laborer, misses all the chastening influence of home life, and develops a morbidness of mood which acts strongly on his industrial relations.

II. We have seen that a part of the unrest is inherent in the material circumstances of the laborer's life. To know the other part, we must study the laborer himself and his less tangible environment. In the factory and workshop population of today, one can scarcely recognize the patient, cringing, submissive laborer of six years ago. He is changing rapidly. He no longer looks upon his masters as heaven born rulers and himself as an insignificant worm of the earth. No more does he quietly put up with insult, abuse, and physical torture, either for himself or for his fellow workers. He realises that it is to the sweat of his brow that the huge profits of the employer, and consequently his motor cars and his bungalow, owe their existence. He reasons with himself that these profits should make possible for him a sufficiency of food, clothing and shelter, and a little to lay by for the rainy season. He sees that profits and all would dry up at their very source if he withdrew his co-operation from industry. He observes a unity of feeling among his brother workers. Unreason and injustice continuing, what is there to prevent him from adopting the one course that lies before him?

Pick up a factory hand at random. An hour's talk with him will convince the most skeptical

of the truth of all that has been stated here. What is responsible for this change? The *Wednesday Review* believes: "The Labor unrest as it exists is an artificial affair for which the political agitator is primarily responsible" (27th Oct., 1920). The opinion of the employers, on this point, is divided almost equally. A section endorses the view of the *Wednesday Review*. In an interview a well known employer expressed this opinion: "Much of the unrest is due to the artificial agitation carried on by the educated community. Strikes are largely due to the lectures of the men who have read accounts of the prevailing conditions in other countries." To say that the labor unrest is in its entirety the work of that remarkable person, the so called professional agitator, is to betray the densest and most unpardonable ignorance of fact. The attitude of the more enlightened section may be summed up in the words of a gentleman very prominently connected with the management of industry in these Provinces. "Our laborers have real grievances. That is the soil. If there were no soil, where would the agitator sow the seeds of discontent?" The agitator rouses the men to a consciousness of their position, to a knowledge of their possibilities; and perhaps incites them to realize those possibilities. As a rule, his place is after a strike has begun rather than before it. He takes the labor mass red hot. Then it is easy for him to mould it as he chooses. In fact he is a symptom of a great disease. That disease is the spirit of the times, of which this unrest is just a manifestation. The employers call it variously "influenza," "strike fashion", "strike mania", and what not. The more learned among them say that the spirit of indiscipline is rife, and proper coercive measures, in the form of a laborers' act or two would set things right. Let us study, one at a time, the elements that constitute the drift of the times.

Too much is being made of the war as having let loose the forces of unrest. In India, the static conditions of life were already changing. The workman was acquiring new tastes, his standard of living was rising by imperceptible degrees, the virtues and the vices of the town were gradually being reflected in his life. A great stabilizing factor in Hindu Society is the *karma* doctrine which gives a religious explanation of the social and economic differences between man and man. The traditions of a rigid caste system further prevented any growth of class consciousness. The Muslims through centuries of social intercourse with the Hindus slowly accepted their philosophy of life. Alike they regarded the gulf between the rich and the poor, the classes and the masses as inevitable. But long before the war, owing to the liberalizing tendencies of the time, the hold of religion on the minds of the people was becoming feebler and feebler. They were becoming less and less prone to respect the sanctity of the existing order of things. The mental and moral outlook of the laborer was therefore changing all along. The war only intensified the changes that had been taking place, for years past.

In the first place, it increased the cost of living so much that the workman was compelled to move for higher wages. Things around changed rapidly. He saw that he must stir if he wanted to maintain the existence of himself and his family. The fact that a conscious change in his relations with the rest of society was possible greatly extended the horizon of his outlook.

Next we have to consider the high pitch of excitement which the news from, and the rumours about, the different theatres of war kept up during four long years. Everybody consequently developed a strong appetite for sensation.

The excitement originally created by the war has been steadily reinforced by the political troubles of the country. Political agitation leaves an element of unrest in the atmosphere which must, of course, upset the mental equilibrium of the worker. Trade Unionism is yet in the stage of infancy. It would be absurd to ascribe an appreciable portion of the unrest to its "mischievous activities." It is indeed responsible for a number of strikes, in the sense that the workmen, feeling the itch of power, lay down tools to redress grievances which otherwise they would have regarded as too small to justify such extreme action. Too much emphasis cannot be laid on the fact that the richer sections, by the increasing display of their wealth, are themselves a very potent cause of the unrest with which we are dealing here. The workers estimate the profits of a firm by the number of the employer's *kothis*, motor cars and servants, and by other signs of luxurious living. Such extravagant expenditure rises in sharp contrast with the destitution of the worker and remains a standing source of irritation to him.

So much about the employee. All would have been well, had the employer readjusted his own position and acted in conformity with the changed times. He failed to perceive the change, or perhaps imitated the ostrich in believing that the crisis in his case would be averted indefinitely. He continued his overbearing attitude, his heavy fines, and his harsh and highhanded treatment. He went on to dismiss his men for slight offences without an inquiry; to deduct their bonus on the flimsiest of pretexts. Still he did not listen to their representations, still he dealt out punishments quite out of proportion to their faults and gave the offender no chance of explaining himself; still he placed no effective check

on the tyranny of his foremen, and allowed them to handle their subordinates as they pleased. He could not get rid of his idea about the traditional relation between master and servant; he did not cease to expect unreasoning obedience to his dictates. Above all he did not concede the men's most reasonable demands, did not redress their most patent grievances.

Consequences are unpitying. The dreaded crisis comes. He yields, for he has no case. From that moment, all trust and goodwill between management and labor disappear. The personal ties are snapped, and no amount of cement can reunite them: one strike changes the whole phase of industrial relationship. It throws the parties into hostile camps, and for the first time gives the men the consciousness of separate existence. That one strike paves the way for many more. Every small grievance becomes the ground for a fresh strike.

The Outlook

What is coming? Is the unrest bound to grow? When will it subside? To these questions the answer depends on a consideration of all the factors operating in the situation, and their net effect in accentuating or damping unrest.

The more one becomes familiar with the life of the workman, in home or factory, the more he is impressed with the fact that in India, there exists a large mass of Potential Unrest; *i.e.*, in a large number of places the prevailing conditions are unsatisfactory in many respects, and unless improved, may become a fruitful source of trouble in the near future. No notice is taken of them, because the laborers themselves have not yet begun to feel these disadvantages keenly. The potential and the invisible unrest will under the stress of circumstances and

under the influence of changing times become actual and visible, unless in the meantime, by some process of progressive amelioration, his position and his means adapt themselves to his rising standard of living.

We may very briefly recount here the causes which have prevented the unrest from coming to the surface :—

- (1) Illiteracy.
- (2) Absence of organization and lack of proper and ready leadership.
- (3) Lack of discipline which comes from education and organization.
- (4) Extremely low power of resistance. Living from hand to mouth, he cannot afford to stand out long.
- (5) Agricultural connection of the worker.
- (6) Adaptability to a lower standard of living.
- (7) The Indian laborer by nature does not possess an aggressive temperament. His role is to beseech with folded hands. He has an infinite capacity for patience. The philosophy of resignation is bred up in his bones.
- (8) Traditions of subordination. Laborers being generally recruited from lower classes cannot easily free themselves from a sense of inferiority. They have a mental and moral incapacity to rise in open defiance of their masters.

Let us see how all this is altering. There can be no doubt that education will spread and penetrate the masses. It will break up the lingering hold of custom, broaden the horizon of the laborer's thoughts, extend his sphere of interests, give new ideas and new ideals, and thus raise his standard of life.

It will reduce the unrest to the extent that it

increases efficiency and makes him able to command more wages. In the earlier stages at any rate it will breed more vanity than efficiency. Education will also enable him to arrive at an intelligent understanding of the situation. When the industry is on the wave of prosperity he will clamor for a larger share of profits: when it is on a decline he will have the good sense to keep silent. With an obdurate employing class making too much of its own rights it forebodes more trouble. With employers who understand the signs of the times, it points to less profits, but a more contented community of laborers.

Labor organisation too must advance. The recent all India Trade Union Congress is an earnest of rapid progress in this direction. This besides giving the men funds will increase both their inclination and their power to fight, and will discipline them for that purpose. The temptation to try the newly forged weapon will be irresistible in the beginning. Except in so far as it forces the employer into a conciliatory mood, we have no reason to be oversanguine about its effects. In England, trade union's can boast of a career covering well nigh a century; but we can only assert, that there at its best it has not helped to ease the situation.

We can confidently anticipate the gradual divorce of the workman from his land in the village, and the rise of a permanent and settled laboring population in towns. In the villages we still find vestiges of the old communal order. The barrier between the rich and the poor is not prominent. Urbanization will develop class consciousness.

The Political Unrest shows no sign of abating. Of a fiery type of leadership, therefore, the laborers will have more than enough. The changes in the laborers' psychology which have already been outlined

will go on gathering strength. Again, the trend of prices gives no ground for hope that any considerable reduction in the cost of living will occur in the near future. The attitude of the employers too is not reassuring. With the growth of industry, the introduction of new factors—unemployment, for example, will further complicate the situation.

Remote as it is, nevertheless there is a real fear that in India too the industrial warfare will be shifted from the field of concessions to the arena of principles. We dare not predict the course of events; but forecasting tendencies, the conclusion becomes inevitable that the prospect is by no means rosy.

The Cure

The line of reasoning as well as the conclusion depend largely on the point of view taken at the outset. The following are the fundamental principles underlying the suggestion put forward here:—

1. The skeleton of the present order is taken for granted. We can, while preserving the present in outline, so overhaul its machinery and alter the detail of its working as to effectually prevent any unnecessary friction, without throwing ourselves into dangerous experiments. Abhorring all revolutionary change, we must build further on the present and trust to evolution.

2. We can put no faith in a cure-all or in the exclusive application of any one principle, be it co-operation, profit-sharing, works committees, or what not. Many principles will have to be tried and allowed to work side by side, till by the processes of elimination and adaptation an equilibrium is attained.

3. It is necessary that capitalistic management should accede to the reasonable demands of labor; it is more necessary that labor should be in

a frame of mind to make reasonable demands. The guarantee that each will do its part lies in the principle of public intervention and control.

Some Suggestions

Obviously the wages of the employees should be increased at least as much as the rise in the cost of living warrants; but that would be quite ineffectual in diminishing unrest if the prices go up so as to make the increase quite nugatory in the matter of the purchasing power of their earnings. The attempt of the employer to make up by raising prices what he has lost in higher wages is to a large extent responsible for this seesaw process.

To prevent prices from rising, and if possible to bring them down, an effective control over profiteering is the first requisite. The boycott of the Rangoon Tramway Service very well illustrates what concerted action by the public can achieve. Consumers' Leagues as the organised expression of public opinion can do much in this way, but of them we have yet very little in India. There are many practical difficulties in the way of successful legislation for the purpose; still some legal prohibition seems necessary, if only to give a lead to the public in the matter.

Even as it is, we can try to make the present means of the workers go much further than they at present do. We can, by the opening of cooperative stores and by the extension of cooperative credit in urban areas, free them from the clutches of the money lending shopkeeper, who robs them of a considerable portion of their earnings by charging either an exorbitant rate of interest or credit prices which are much above the ordinary market level. We can also improve their condition by diffusing among them education such as is calculated to teach the art of economical living.

It is yet very imperfectly understood that long hours, dark, dingy and overcrowded houses have something to do with the unrest of the day. If we were only to make the home-life of the workers a little brighter, a little less gloomy, we would be taking a very long step towards the solution of the labor problem. Hence it is that we feel it necessary to consider at length the potentialities of welfare work.

Let us suppose that there is in each factory a committee in charge of welfare work on which the men too are represented. The members of the committee by some system of turns, pay Sunday visits to the houses of the workmen. There is, therefore, the opportunity to have an hour's talk with each workman, to discuss with him his difficulties and his needs, to see if there is illness in the house which calls for a report to the doctor, and to see many other things which are so much worth seeing, and which owing to the confidence he enjoys, a welfare worker alone can see. So we get a sort of a barometer of the industrial atmosphere which indicates the existence of irritation before it develops into serious unrest, and forewarns the public against any coming storm. Much is being made in these days of the absence of personal touch between the employers and the employees. We cannot restore that, but these house to house visits will afford a good substitute. They can be further utilised for the dissemination of correct ideas among the workmen, for making them realize the difficulties of their masters, and also as an agency for the collection of reliable and useful family budgets and other statistics. Success depends on the way in which welfare work is administered. It should not be given as a charity, nor taken as a part of the bargain, but it should be conducted in

spirit of social service, as a recognition of the humanity of the employee.

It is not out of place to raise this note of warning that efficacy of welfare work is most conspicuous in the earlier stages of industrial unrest, before the men have thoroughly imbibed the ideas of class hatred. After that all overtures will breathe a suspicious air, will be looked upon as a trap.

A similar warning seems necessary regarding the course which Labor organisation is taking in this country. A union springs up during a strike and is constantly afraid of being strangled at its very birth. If unionism grows in an atmosphere of hatred and opposition, struggle and strife, it will not easily be able to free itself from the spirit of warfare. With a battle as its first tradition a trade union is bound to develop an aggressive character.

It is the plain duty of the employers in India to accept the spread of trade unions as inevitable. They may even win labor's gratitude by doing the graceful act of assisting at their birth. The question of their practical utility is the shape they are going to assume here. We should not rear up a slavish imitation of Trade Unionism in the West. We should evolve an organisation which is in keeping with our ideals and the needs of the future. We must avoid assiduously the importation of false economic standards, the "ca'canny policy" the "closed union" and numerous other anomalies. Organisation guided on the right lines will be a very valuable aid in the work of successful conciliation and effective arbitration.

We shall briefly notice two principles which are sure to find an increasing place in the industrial economy of the future. One is the *principle of permanence*. "The very horse that is permanent", says Carlyle, "how much kindlier do he and his rider

work, than the temporary one hired on any hack principles yet known". So long as supply and demand alone regulate the relations between the employers and the employees, so long as there is between the two no substantial community of interest, turmoil and unrest must continue. The "cash nexus", if nothing better can be contrived, must be re-arranged on a more human basis.

It implies first of all that the continuance of a workman in his job, does not depend entirely on the whims of a hot tempered foreman, or the sweet will of an autocratic manager. It is, next, a plea for giving to the workman a permanent interest in the industry in which he works. The permanent interest may take shape in any of the various profit sharing or copartnership devices, according to the technical nature of the industry, and the temper and understanding of the labor community.

The other is the *principle of partnership*. It means the increasing association of the workman in the management of industry. This derives its strength from the fact that the sense of responsibility exercises a restraining and sobering influence on the mind and is the only cure for restless energy which causes mischief. The exercise of power tempered with justice and mercy may satisfy for a time, but the democratic tendencies of the time make it clear that even a just despotism will not do. In the present circumstances the main problems of industry cannot be left to the uncertain guidance of the debating room. But even now there is an infinite scope for the useful activities of mens' committees of the Whitley Council type, in which they have the right to express opinions, ventilate grievances and discuss the immediate conditions of their work. A point of huge practical importance arises in connection with the attempts of

some of the railway companies to set up committees of workmen without recognising the independent workmens' associations. The committee is aimed at breaking up the union, whereas the latter endeavors to bring about the failure of the committee scheme. So neither succeeds. A more sensible way would be to let the two work side by side, to recognize the union, which will have no further motive to oppose the committee; and to use the committee to guide the progress of the union on the right lines.

What we have outlined so far would take time to produce any appreciable effect on the situation. The question remains how to deal with the strikes that now come and go as a matter of routine. Every industrial centre should no doubt have a conciliation and an arbitration board; but their use should be left to the option of the parties. We must have recourse to legislation on the lines of the Industrial Disputes Act of Canada, making compulsory the investigation of a dispute before the declaration of a strike or a lock-out. To make this investigation what it ought to be, the Labor Bureau should, of course, provide the committee with accurate statistics of prices and changes in the cost of living. It should also be empowered to examine the books of the employer, to see the financial position of the concern, and the rate of its profits. Its recommendations and proceedings are to be placed before the Public. The Public should act through a board elected at a mass meeting of the City or on the municipal election plan. If the parties do not come to any agreement after the investigating committee has announced its findings, this board should hold a further independent inquiry and declare its award. The public now knows its own mind, and no party can long afford to fly in the face of public opinion.

The *Principle of Public Intervention* deserves a

more detailed treatment than for considerations of space it can receive here. It is destined to govern the relations between Labor and Capitalistic management, in the future. The idea is that to hold the scale even, there should be a third party disinterested enough in the actual quarrel to be impartial; but having a strong indirect interest in the maintenance of peace. It can make its verdict practically binding on both sides by throwing its weight against the party to whom it is not acceptable. These decisions represent the consensus of public opinion, and all changes thus introduced into the industrial system would not be arbitrary or revolutionary, but would be in full accord with the growth of public conscience. We require neither *Laissez Faire* and undiluted despotism of the employer, nor nationalisation and baneful bureaucratic control, but we do require a conscious *Public Control* of industry.

SUGGESTIONS FOR THE IMPROVEMENT OF THE CONDITION OF INDIAN LABOR

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Great interest has now-a-days been aroused in labor problems almost all over the world. In India, as in other countries, the need for increased production is greatly felt, and the attempt to increase production is being seriously hindered by the deplorable labor troubles of which we have heard and seen so much. Ignorance and want of character on the one side, and want of a broader and wider outlook of economic principles and a false sense of prestige on the other, have so far been responsible to a great extent for the troubles between the employee and the employer. Both of them forget for the moment that what is wanted is increased production, and that it is in the interest of both the parties to have it fully at heart. Even the employer, who is supposed to employ his capital and labor, etc., for production, sometimes forgets his own object, or, if he does not do so, yet in his obstinate and vindictive attitude in times of strikes towards his employees he does great harm to himself and to humanity as a whole. Similarly, the poor employee does not understand, or, if he understands it, he is led away to do something the evil of which recoils on himself.

I consider these labor troubles to be a serious obstacle to the growth of all real progress, and any attempt to countenance them on the so-called principle of competition is fraught with serious danger to humanity. Personally I believe that the time is not far distant when we shall hear of no such labor troubles. We are, I think, passing through a transition period in which we are emerging from the era of competition. My belief is amply illustrated by the political, social and other combinations apparently based on the principle of co-operation which have recently been formed. My belief is further strengthened by the fact that we have come away so far from the old economic order of self-sufficiency that it is almost impossible now to return to it. Specialisation has become the prominent feature of the day leading to greater and greater inter-dependence. If the economic organism is to live, the process of differentiation is bound to be accompanied by the process of integration. And though for some time we may pull on with makeshifts and compromises, we could not possibly avoid accepting and abiding by the principle and spirit of co-operation which alone can make progress possible under the new circumstances.

We thus find that the keynote of progress is not considered nowadays to lie so much in competition as in co-operation. I would not stop here to illustrate how in all the departments of life the principle of co-operation is being slowly but surely substituted in place of competition. But if this process is remarkably slow anywhere, it is so in the relations of the employer and his employee, though both of them have become so much dependent on one another.

Fortunately in India the cleavage between labor and capital is not so wide as in European countries and though ignorance and prejudices might

work as great obstacles, yet it may be hoped that if real efforts were made by the educated public and by the economists of India to infuse a spirit of harmony and co-operation between the employer and the employee, the almost inherent Indian nature of the employee of a sense of attachment and affection for his master would prevail over his imitative and assumed tendencies of actions borrowed from outside. Similarly, I hope the Indian employer would also respond to the call of co-operation. What is wanted is a strong and sincere public opinion based upon, and backed by, the authoritative opinion of economists in India. So long as the economists fight shy of their theories and are unable to pronounce their definite and authoritative opinion on such fundamental principles, a real consensus of public opinion cannot be formed. Many economists are still clinging to the fascinating principle of competition as a potent factor in the production of wealth; and though they see that the life of real competition is now over and that instead of equal and healthy competition they find unequal and cut-throat competition, they yet hesitate in their condemnation of the same, and do not preach the principle of co-operation as an active and powerful factor in the production of wealth, with that force and courage which the economic situation of the present times demands. I resist the temptation of going into the details of this very important point. But let me emphasise once more that the economists must make up their minds that it is high time for them now forcibly to preach the gospel of co-operation. One word more on this point. This gospel must first come from the economists, for, if it come from a layman it is apt to be considered by the capitalists as a doctrine preached, not from the business point of view, or, in accordance with

basic principles of economics, but out of a humane or philanthropic or any other motive. Both the parties must be made to understand by the logic of economic reasoning that the principle of co-operation is an *ideal* factor in the production of wealth. Thus my first suggestion with regard to the improvement in the conditions of Indian labor is to preach in accordance with a recognised and a basic principle of economics, the principle of co-operation as an active and an ideal force in the production of wealth, ultimately leading to increased shares in the national dividend both to the employers as well as to the employees.

My other suggestions are of a more practical, or, I should rather say, of a more particular nature, for I am not yet sure how far they would be considered as practicable. At all times we hear complaints against the inefficiency of Indian labor. The employer is perhaps the greatest complainant in this respect. At any rate, he raises that plea when any demand for higher wages is made. All the same he realises that if his labor is efficient, he would be benefited by it. But what has he done to increase the efficiency of labor? The problem is an urgent one and requires our serious attention.

The efficiency of labor has an intimate connection with the standard of living of the laborer. The main conditions for efficiency of labor are skill, application and an incentive to work. For skill, training is necessary. For application, vitality and habits of concentration and work, both of which, vitality in particular, depend so much on a man's standard of living as regards good and healthy surroundings. It is also a complaint against the Indian laborer that, if he can get work sufficient to live by, he will not work more in order to earn more.

That is due to his low standard of living. If his standard of living could be increased, he would have to work more in order to earn more to meet his increased standard of living. I believe therefore that a laborer must take good and healthy diet, and live in a healthy atmosphere, in order to develop the power of application which is necessary for efficiency, and that he should otherwise increase his general standard of living so as to have an additional stimulus for work which is also necessary for efficiency. Before reaching therefore the problem of the efficiency of a laborer, one is faced with the equally difficult practical problem of how to increase his standard of living. I venture to suggest some practical means by which the standard of living of a laborer may be increased to an appreciable extent. Many of you might question the practicability of the suggestions that I am going to make but I commend to your serious consideration those suggestions before you finally reject them as impracticable. I may also tell you that I do not mean that the suggestions that I am making are the only means to attain this end. For example, there is the universally accepted means of education. My suggestions are with a view to bring about comparatively more immediate results in its direction.

I first suggest that the laborers should be provided with uniforms in each and every factory. There should be duplicate and if possible triplicate sets of these uniforms so that they can be washed and changed by the laborers at short regular intervals.

The cost of these uniforms may be partly borne by the millowners and partly by the laborers, if the former cannot see their way to meet the cost wholly. But the share of the cost falling on the laborers should be recovered by small monthly instalments

from the wages of the laborers. There are three advantages of this system. The first and the distinct advantage is this that the laborer would gradually accustom himself to cleaner and more decent dress; so that after a certain period he would not like to put on a dress which is shabby and dirty. This would increase his standard of living so far as clothing is concerned. Another advantage of this is that a uniform, if it is supplied free, or, a major portion of the cost, if it is borne by the employer, is a great attraction to the laborer to settle down in the factory. The example of a small factory in the Indore State is germane to the point. There it has been found that a uniform has a special fascination for the laborer and he loves to have it. Besides this, a uniform adds to the efficiency of the laborer. In most of the mills and factories you will find operatives working with very awkward and inconvenient dresses on their bodies, and they have to devote some of their attention to managing their dress at the time of working, which they might with advantage devote to their work. You can easily see how a convenient uniform would allow much freer movement of action to the laborer and thus add to his efficiency of work. For more than one reason, therefore, I would advocate the adoption of the system of uniforms in each and every mill and factory in India.

I would now refer to the food which the laborers generally take. It is never substantial food that they take: never the food which adds to the vigor and vitality of the laborer. It is difficult to make him spend his small income wisely. The one suggestion that I would like to make is that the millowners should start the system of messes in their mills, at first providing rather cheap food and slowly raising the quality and the standard of the food with due

consideration for the income of the laborer. Very few will join at first. But if some are induced to join by giving special concessions, others will, I am sure, follow suit. And though the progress in the number might be slow at first the advantages of regular and good food being supplied in a decent manner, would prove to be an attraction almost too great for the laborer to overcome, if he could only afford to join the mess. This would put the laborer in the habit of taking good and healthy diet and he would after a certain length of time, find it difficult to take bad and unhealthy food. His example will be followed by others who may not join the mess. This is I hope, an effective means of raising his standard of living as regards his food.

Much has been said about the housing of the laborers and that necessity has already been realised, so I need not dwell upon it here. I may only mention that if satisfactory arrangements are made about housing and providing healthy and congenial surroundings to the workmen it would help in building up a settled labor population, in raising the standard of living of the laborers and also in increasing their efficiency thereby.

Thirdly, I would suggest that special concessions and facilities should be given to the batches of laborers at periodical intervals for travelling, so that by imitation and example they might learn things and raise their standard of living.

These are some of the suggestions that I have made with regard to the raising of the standard of living of the laborers. They may appear rather fantastic; but if there be zeal and enthusiasm on the part of the employer to raise the standard of living and thus to increase the efficiency of this laborers, and, if he looks at these things from the broader

outlook of the economic principles which govern production, with which he is undoubtedly concerned, I am sure that he can successfully bring these suggestions into practice and thus benefit his employees as himself.

In a statement made in the foregoing pages I have mentioned that there are three necessary conditions of efficiency of labor, *viz.*, skill, application, and stimulus to work. The latter two have been dealt with in their bearing upon the standard of living which is thus an indirect means of attaining efficiency. I now want to say something about skill. Skill may be of two kinds: natural skill, which may be regarded as intelligence or natural aptitude and ability for work. I have nothing to say about it, for it is there, and needs only development, and for that training is necessary; and this skill which is obtained by training generally goes by the name of *acquired* skill. Besides this, special skill is required in special kinds of work and for that special training is necessary.

Proper arrangements should therefore be made to develop the general skill of a workman, as also to give him special training in order to specialise his skill in any particular line. In this connection Government has much to do. But apart from that, the millowners should do something and I refer to that only in this place. Any attempt to train the local people would be amply repaid. In the two cotton mills of Indore particularly I find that many of the skilled workmen are imported from outside; and there is often the complaint of their unsteadiness in any one place. I would suggest to the millowners that they should maintain a workshop and admit a fixed number of apprentices every year, recruited as far as possible from the local material, and give them general and ordinary skilled training. The

apprentices may be paid if it is found desirable to do so. It would ensure to the mills a reserve force ready to take the place of workmen in times of necessity, besides producing a class of skilled workmen from which to draw their ordinary supply of labor.

The object of the training should be to teach the laborers the methods of working which save time and labor and which add to their efficiency; as well as to train them in special branches. In this case, as in all such cases the millowners should cast aside the narrow cloak of ideas and try to look forward. Everything should not be valued in terms of immediate gain. Even supposing that a particular mill may not be able to utilise or be able to get the benefit of the labor trained by itself immediately it should not matter much. Some sacrifices should be made in the beginning. It would be better if such questions were taken up jointly by the Associations of several mills (where such Associations do not exist, they should be formed) and that they start such work together and regulate, if necessary, the influx of these trained apprentices from one mill to another. The point is that some solution, some constructive device, should be found, rather than ignore taking action in any matter which is no doubt beneficial but which is beset with certain difficulties.

One more suggestion that I have to make in connection with the measures for increasing the efficiency of labor and more particularly for bringing into play the inventive faculties of the laboring class is that special prizes should be awarded for extraordinarily good work and for inventing any labor-saving devices.

I have much to say in respect of the revision of the present factory rules and regulations, but the

subject requires independent treatment, if full justice is to be done to it. Here I would only point out that it is no use having, even an *ideal* Factory Act, if it is to remain only a dead letter. Every endeavor should be made to see that the provisions of the Act are properly enforced. And for this the number and status of the factory inspectors should be raised; and men having real interest in the labor problem and having proper understanding about industries should be appointed. Besides, I would suggest that the factory owners should by rotation *reside* in the premises of the mills under their charge for a certain period of the year at least, besides paying frequent surprise visits to them during the period when they do not reside there. This would, I believe, ensure strict vigilance and first-hand information, about the labor condition in each mill or factory.

Lastly I suggest that separate vital statistics of laborers working in mills and factories should be maintained and published so as to exhibit the effects of factory labor on the health and vitality of the laborers. A comparison of the vital statistics of one mill with those of another might be an interesting study for finding out if conditions of labor in any particular kind of industry or even in any particular mill or factory are deleterious. Enquiries could be made then as to why the vital statistics of any particular industry or any particular mill recorded bad results, and steps might be taken, if possible, to remedy the evil.

These are some of the suggestions that I have ventured to make before this Conference. The spirit that permeates my paper evidently is the rather bold assumption that the employers would realise that the time has arrived when in the realm of production the principle of competition should be subordinated to the principle of co-operation. But I am sure that if the

employers begin to act in accordance with the spirit of the advent of the new and glorious Economic Era which co-operation promises, they will reap the benefit of it in proportion to the spirit of co-operation with which they would be permeated in their dealings with their employees, who are but a part of the same Economic Organism to which they themselves belong.

SUGGESTIONS FOR LABOR LEGISLATION IN INDIA

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The International Labor Conference which met at Washington in October, 1919, drafted certain Conventions and recommendations which have been submitted to the nations forming the International Labor Organization of the League of Nations for ratification. India being a member of the League of Nations was represented at the Conference. Accordingly the Conventions, etc., have been submitted to the Government of India, and the Board of Industries and Munitions have circularized the local Governments and the Chambers of Commerce for their opinions. These are now being received by the Government of India and it is proposed to amend the Factories Act at the forthcoming session of the Imperial Legislative Council.

It is especially opportune for a representative gathering of economists in this country to give expression to their opinions before legislation is initiated. With a view to promoting discussion and eliciting certain definite expressions of opinion, I propose to state, in the course of this paper, the main draft Conventions, to indicate the extent to which these Conventions can be adopted and further to suggest other labor laws which should at an early date find a place among the statutes of India.

The Conventions and recommendations of the International Labor Organization may be summarized under the following main heads:—

1. The limitation of the hours of labor to sixty in the week.
2. The establishment of free employment agencies and an effective system of unemployment insurance.
3. The regulation of the employment of women before and after childbirth.
4. The prohibition of night work for women and young persons.
5. The prohibition of the employment of children under twelve years.

The above are to apply to extractive industries, transport, ship-building, generation and transmission of electricity, constructional work, and industries in which articles are mended, repaired, altered, manufactured, etc.

Other recommendations include the protection of women and children against lead poisoning, the prevention of anthrax, etc.

At the present time the only Act concerned with the regulation of the employment of industrial labor in India is the Indian Factories Act, 1911. This Act applies to "any premises wherein or within the precincts of which steam, water or other mechanical power or electrical power is used in aid of any process for or incidental to making, altering, repairing, ornamenting, finishing or otherwise adapting for use, for transport or for sale any article or part of an article and employing 49 or more persons." The Indian Mines Act (VIII of 1901) empowers rules to be framed for the prohibition, restriction and regulation of employment of women and children above or below ground; but no rules have been framed.

The proposed Conventions are for the most part to

apply to many industrial undertakings which at present are not regulated by either of the above Acts—mines, railways, docks, etc. For this reason, the Government of India propose extending the provisions of the Factories Act to establishments employing more than nineteen persons, and to empower local Governments to extend the Act to factories employing not less than ten persons whether they use power or not. While the need of control and regulation of small industrial establishments is undoubtedly of great importance since the worst abuses of sweating, ill ventilation and bad sanitation exist in such concerns, yet until Government is prepared greatly to increase its staff of factory inspectors and carry out more frequent inspection of factories, mere legislation will be of little avail. As matters stand at present, even with the factories which now fall within the scope of the Factories Act, large numbers remain uninspected, especially in the Punjab, Bihar and Orissa, and Bengal. While strongly supporting the suggested course of action of the Government of India that smaller industrial concerns should also be subject to the provisions of the Factories Act, unless this is to be accompanied by a large increase in the inspectorate, I feel that it would be not be wise for the existing body of inspectors to have to shoulder additional responsibilities.

Sixty-Hour Week

The first proposal of the International Labor Organization is the establishment, so far as India alone is concerned, of a sixty-hour week. For all other countries, except Japan, China, Persia and Siam, a forty-eight hour week is proposed. The Indian Factories Act limits the hours of labor of an adult male worker in a textile factory to twelve hours per

day with an interval of at least half-an-hour after every six hour's labor. There is no limit to the working hours of persons employed in non-textile factories.

Actually we find that whereas in many parts of India the maximum—the twelve-hour day—is being worked, a large number of textile factories are already working a sixty-hour week. In Bombay, for instance, since the mill strike of January last, a sixty-hour week has been in operation. The results of the change from a twelve to a ten-hour day have not been unsatisfactory. While the total production is not as great as under the longer working day, production has in no way fallen in relation to the decrease of the working time. A prominent mill-owner recently remarked that mill hands are now more energetic and are producing in ten hours what they formerly produced in eleven. Even before the sixty-hour week was adopted in Bombay, several textile concerns in South as well as North India had adopted the ten-hour day and found it satisfactory from the standpoint of both employers and employees.

In Bengal the practice among the jute mills is to work a peculiar shift system. The system is peculiar to Calcutta and somewhat difficult to explain briefly, but under it the great majority of the general workers, including almost all the women, work from 8 to 9½ hours only, or about an average of nine hours daily. Labor in the jute press houses is by piece work, the men coming and going as they please.

Turning to non-textile establishments, no limit to the number of hours worked is laid down by Government. This is obviously an unfair distinction. If abuses are not to be tolerated in these concerns, it is essential that the discrimination between textile and non-textile factories should be swept away and a sixty-

hour week made uniform in all industrial establishments, with certain exceptions. We find, for instance, the Calcutta paper mills working on two twelve-hour shifts. On the other hand, in the Calcutta engineering workshops the practice is generally to work $8\frac{1}{2}$ hours on five days of the week and 6 hours on Saturday, Sunday being a holiday. On the tea estates of N. E. India, factory work is carried out from May to November. The hours of labor for this work are irregular and depend on weather conditions and the amount of leaf to be manufactured; but not being a continuous process, the hours of work embrace considerable periods of "standing by". On the average, the hours are not more than 7 to 8 daily. During wet weather, labor is worked by shifts and hours are longer. In the coalfields, the miner works as he likes. He is paid piece-wages and he generally stays down until he fills two tubs. There is no regulation of hours at all.

I am of opinion that the sixty-hour week should be introduced and applied to all factories employing 20 or more persons, to mines, railways and docks, but that in the case of the mines definite shifts should be laid down.

Unemployment

That India must work out her own labor code is no more strikingly shown than in dealing with the question of unemployment. The existence of the joint family system and the ready aid of a caste fellow in cases of lack of employment do not necessitate a poor law system or call for a scheme of unemployment exchanges and out-of-work benefit. The problem of under-employment and unemployment as it is known in Britain, the United States and continental countries is unknown in India. The nearest approach

to it is to be found in the employment of casual labor in our ports and chief towns; but the methods of recruitment of dock labor in Bombay, for instance, is far more satisfactory in its results than the system which gives rise to large masses of unemployed at the London and other docks of Great Britain. The persistent cry of factories and workshops in India, on the other hand, is for more labor. The problem in India is not so much one of unemployment as the *scarcity* of labor and the best means of recruiting fresh sources of supply to meet the increasing demand. Under these circumstances there appears to be no immediate need for agencies to cope with such unemployment as exists in India and the convention concerning this subject should not be ratified by the Government of India.

Employment of Women Before and After Child-Birth

A grave omission in the framing of the Indian Factories Act is that it made no provision for the regulation of the employment of women before and after childbirth. There is no doubt that one of the causes of the heavy infantile mortality among the children of working women is that the women are frequently employed almost up to the time of their accouchement. Disgusting sights are unfortunately to be witnessed even in these days when, for instance, a woman is delivered of a child at the factory gates or in the factory compound. That such a state of affairs is allowed to continue is a disgrace. The proposed convention merely lays down that "a woman shall have the right to leave her work" if she produces a medical certificate stating that her confinement will probably take place within six weeks. To any one who is acquainted with the life and habits of the woman worker in India, it must be apparent that this clause

would be nothing short of a "dead letter". What Indian woman worker would in the first place take the trouble and go to the expense of procuring a medical certificate? Whenever she wants to leave her work, she just stays away. What is more essential is that she should be compelled to stay away a stated period before her confinement. While this would be extremely difficult to accomplish under existing circumstances, yet if a scheme for the payment of maternity benefit for one month before and one month after confinement were introduced, this would in itself encourage women temporarily to suspend their work at mills. A careful actuarial analysis of the cost of such a scheme would probably prove that it would not be so costly as may at first sight appear.

While it is extremely difficult to enforce absence from a factory before confinement, it would be a comparatively easy task to prevent a woman engaging in work immediately after her confinement. The compulsory notification of births provides an easy means by which mill managers may be informed of the accouchement of any of their employees. Further, the very harmful practice of allowing women to bring infants and young children into the working rooms of factories, a practice which I strongly condemned in my paper last year, should immediately be stopped. It is to be hoped that a provision against this practice will be a feature of the new Factories Act. A mother will then be compelled to remain at home to nurse her new born infant or to employ a nurse or foster mother, the latter being unlikely.

Prohibition of Night Work

Night work in factories by children under age is already prohibited by section 23(b) of the Indian Factories Act, which lays down that "no child shall

be employed in any factory before half-past five o'clock in the morning or after seven o'clock in the evening." Section 24(a) similarly prohibits the employment of women at night. Section 27 of the Act permits women in ginning and pressing factories to be employed at night and this frequently gives rise to great abuses. It is in these seasonal factories that the greatest evils exist for, owing to the scattered distribution of the factories, inspection is irregular and infrequent owing to the difficulties of carrying it out. As stated in my paper last year, cases have been recorded where ginning factory managers have been convicted for working their women laborers for twenty-four hours.

Prosecutions for breaches of the law when detected have little deterring effect, as the fines are light compared to the gravity of the offences committed. There is no reason why seasonal factories should receive any differential treatment in the matter of the night employment of women. Section 27 should accordingly be deleted.

The Prohibition of the Employment of Children under 12 Years

The Draft Convention fixes the minimum age of employment of children at fourteen years for all countries except India and Japan. For India it is laid down that children under twelve years shall not be employed in—

(1) Factories working with power and employing more than ten persons.

(2) Mining, quarrying and other extractive industries.

(3) Rail transport and at docks, quays and wharves.

Existing legislation in India fixes the age of employment in factories at nine years; but even this limit is in practice lowered owing to the difficulty of ascertaining the correct age of a child and to children obtaining

certificates of age before they are entitled to them. Seasonal factories are frequently found to employ children under age.

In mining no restriction on the employment of children is made. According to the Indian Mines Act, a "child" means a person under the age of twelve years, and the Governor-General is empowered to "prohibit, restrict or regulate the employment of children either below ground or on particular kinds of labor where such employment is attended by danger to the life, safety or health of such . . . children." But no use has up to the present time been made of this power. According to the latest available statistics, there were 681 children employed below ground and 2,304 children employed above ground in coal mines in 1918. These numbers form '5 per cent and 3'5 per cent respectively of the total number of persons employed below and above ground. It is not likely that a restriction on the employment of children at mines would seriously affect the amount of work done. When it was proposed in the nineties of last century to prohibit the employment of children under the age of ten years below ground in any mine, the Committee of the Indian Mining Association objected to the proposal on the ground that the exclusion of children from mines would involve the mothers remaining above ground and that this would cause the fathers to strike work. Eventually the proposal was dropped.

A propos the Draft Conventions, the Committee of the Bengal Chamber of Commerce are of opinion that the scope of the conventions should be narrowed and applied only to factories as defined by the Factories Act and possibly to the coal mines. They consider that nine years is not too young an age for children in India to commence work and that more harm would be done to allow them to run loose in

crowded mill areas than to keep them engaged in their present employment. They hold the view that until compulsory education is applied to all classes of children, the minimum age-limit of children should not be raised, but that the six-hour day, which is at present compulsory for children (between the ages of nine and fourteen) in textile factories only, should be applied to all factories.

While there is much to be said for the view that other employment must be found for the children released from industrial employment, this cannot be used as an argument to justify the health of the children being damaged by employment inside factories and below ground in mines. So long as the employment is in healthy open-air surroundings such as in building operations, at docks, on railways, etc., such employment may be, at any rate for the time being, tolerated. But I do not share the view of the Chamber that nine years is not too young for children to commence work in industrial establishments in India. The Collector of Bombay, who may be regarded as an unbiased person, in his note on the Bombay Factories Report for 1918, advocated the raising of the minimum age for employment in mills from nine to twelve. The Indian child is poorer in physique than his western brother and he has to work under more trying conditions, climatically as well as industrially, than the European child, yet the age-limit proposed for the latter is not twelve but fourteen. If anything, it may be said that the Washington Conference has erred on the side of leniency with regard to fixing the age limit. On the whole, the best attitude for India to take with regard to this Draft Convention is that it should be ratified in so far as it relates to factories and to labor below ground in mines and quarries, but that until such

time as compulsory primary education is established in industrial areas, the terms of this convention so far as it relates to railways, docks, and open-air employment should not be ratified.

This concludes the first portion of my paper, *viz.*, a review of the various proposals made by the International Labor Organization of the League of Nations.

It is now for us to consider whether, apart from the above proposals, the existing Factories Act should be amended. Utilising my paper on 'Industrial Betterment' as the justification for making these suggestions, I intend merely to outline my proposals.

The Factories Act should be amended so as to provide that:—

(a) Every factory must have a rubber tyred ambulance stretcher which must be kept in a good state of repair.

(b) A first-aid chest must be provided in each department of a factory. Chapters 8, 9 and 10, of the Indian Manual of First Aid should be printed and hung up in prominent places in factories.

While it would not be possible to legislate on the subject, Government might urge employers to adopt the following suggestions in order to minimize the risk of accident and to facilitate the immediate treatment of injured persons:—

(i) The instruction of all new employees on safety lines, and the encouragement of suggestions by employees as to methods of preventing accidents.

(ii) In those industries where labor is sufficiently intelligent and educated the establishment of safety committees formed of representatives of workers and of the management. At Port Sunlight the result of safety-first organization has been the reduction of accidents by 50 per cent in 1917, a further 12 per cent in 1918 and by 5 per cent in 1919.

(iii) The encouragement of first-aid classes among the foremen and more intelligent of the workmen.

Government may well take the lead in this matter by establishing such a safety-first organization in Government establishments, State railway workshops, etc.

Further provisions of the new Factories Act should be :—

(c) Every factory must provide a messing place, its size to be determined by Government and to vary in proportion to the total number of employees in the factory.

(d) Every factory employing women workers must provide a crèche in the charge of a properly-qualified nurse.

(e) In cases of deliberate infringements of the law and where breaches of the Act are not the result of carelessness or neglect, the agent and employer, occupier or manager of a factory should be held jointly and severally responsible and should be held criminally liable for such acts.

(f) The limit of fines which at present is fixed at two hundred rupees should be raised to one thousand rupees and the term of imprisonment increased to not exceeding two years.

The amendment of the Factories Act, however, will be of little avail unless it is accompanied by a great increase in the staff of inspectors appointed under the Act. There is also an urgent need for the appointment of women inspectors for factories where women are employed.

So far we have confined ourselves to a consideration of the existing labor legislation and amendments that appear essential in view of the deliberations of the International Labor Conference and the existing conditions of employment in factories here. Apart from this, new lines of labor legislation are under consideration as a recent speech of Sir Thomas Holland indicates. They are :—

(1) The legal recognition of properly constituted trade unions.

(2) Workmen's Compensation.

(3) The establishment of conciliation and arbitration boards.

(4) The establishment of Whitley Committees.

Dealing with each of these in turn, briefly, let us consider the legal recognition of trade unions. The last two years has witnessed the rise and sporadic growth of a large number of self-termed "trade unions". The initiative in forming these small groups of workers (for in most cases they are comparatively small) has been taken by politicians and lawyers. Owing to the ignorance and lack of education on the part of the workers it is not surprising that the organization of these bodies has come from "without" rather than "within", but while this was inevitable it is to be deplored that social workers did not take the initiative, but that they have allowed the lawyer-politician class to capture and control these bodies. A feature of many of these so-called "unions" is the absence of any rules (at any rate printed and published rules) and the organization and control of a large number of unions relating to different trades by the same group of persons.

Frankly these unions have not been established in the best interests of labor, but are largely to be used to employ the voice and the strength of labor for political ends. But there exist in this country a few bodies which are being organized by the workmen themselves on the lines of British trade unions and the objects of which are consistent with the best traditions of labor. Many employers would welcome the formation of such bodies, as experience has shown that these unions are prepared to negotiate with employers and are in a position to enforce the terms

of settlement. But this cannot be said of the vast majority of labor organizations in India. It would be in the best interests of labor itself if Government would undertake the legal recognition of unions by a system of registration. Such societies only should be registered as first submit their rules for approval to the Board of Industries and Munitions and the rules must indicate that the control of the society is in the hands of the workers themselves. (This would not prevent the society having a legal adviser.) The registration of a society should carry with it the privilege that the union would be free from legal responsibility from action taken by the union in a strike, etc., which may lead to loss or damage on the part of the employer either directly or indirectly.

Workmen's Compensation

The subject of Workmen's Compensation raises great issues of far-reaching effect and in considering it one has to bear in mind the interest of labor on the one hand and industrial development on the other. While no one will deny that the dependants of a worker who is killed in performing his duties should be compensated and that the worker himself, if permanently injured and incapacitated, should receive compensation, especially when the accident arises through no negligence on his part, yet when once this principle is recognized and put into practice it is but an easy stage to extend it to compensation for all types of accident whether permanent or temporary, serious or slight. And here lies the danger especially in a country like India. The number of self-inflicted injuries would probably immediately increase.

With this reservation one can proceed to consider, first, whether there is a need for legislation

establishing Workmen's Compensation, and, secondly, if there is a need, to what classes of injuries and to what industries it should at first be applied.

A few firms among the jute mills, coal mining companies, etc., are in the habit of making provision for a man or his dependants in the event of total disablement or death. Compensation takes the form either of a bonus, pension or the employment of the dependants if they are in a position to engage in labor. But no pension or gratuity can be demanded as a right, for it depends very largely upon the good-will and the charity of the employer. Unfortunately, it cannot be said to be the practice of firms to compensate, and the question is immediately raised as to whether the frequency and nature of accidents is of such a kind as to demand some form of compulsory compensation. Dealing with dangerous callings only, we find that in 1918 nearly 200 coal miners lost their lives whilst a larger number were seriously injured. Compared with the numbers employed in the industry, this gives a death-rate per 1000 persons employed below ground of 1·6 and above ground of ·3—which clearly indicates the risk of death in a mine is five times as great as on the surface. When we commence to analyse the causes of the accidents and endeavour to locate the blame for them we learn some interesting facts. Half the accidents which occur are occasioned by falls of roof and of sides. "Haulage," and "Shaft" accidents each form 10 per cent of the whole. The development of deep mining introduces a new danger in the form of falls of material from the sides of the shaft. "It has not been the custom in India to brick or line shafts and at shallow depths this does not appear to have been much needed . . . a limited experience of shafts over 800 ft. has proved the increased pressure due

to depth is exerting its effect and the liability to falls of stone from the sides of such shafts is greater." The increased use of electrical power at mines is also bringing its train of accidents. Apart from this, each year more collieries are reaching the second stage of working, *viz.*, winning the pillars which is more dangerous than gallery driving. Hence we are not justified in expecting any decrease in the number of accidents; on the contrary the number of accidents will most probably increase.

The location of blame for accidents is always a difficult matter but we are justified in accepting the statement of the Chief Inspector of Mines in India. He attributed 50 per cent of the accidents in 1918 to misadventure, 30 per cent to the fault of the deceased, 11 per cent to the fault of fellow-workmen or subordinate officials. In other words, one-fifth of the lives lost in mines (coal and other mines) were attributed to the fault of the management, officials or fellow workers of the deceased and half the fatal accidents to misadventure. It is not surprising then that with the risk attached to mining, a demand should be made for compulsory compensation.

A similar demand is being put forward by railwaymen. A study of accident statistics for 1918-19 shows that 450 railway servants were killed and 850 injured. This compared with the numbers employed shows a death rate of about '8 per 1,000.

With these facts before us, one is justified in taking the view that a Workmen's Compensation Act applying to such dangerous trades as mining, railway employment, etc., should be introduced, but that compensation should only be paid in the event of loss of life or permanent disablement.

I propose to dismiss the subject of Conciliation and Arbitration Boards in a few words. Knowing the

nature of Indian labor as we do, it is only where well-organized trade unions exist, (*e.g.*, on the railways) or where labor is sufficiently intelligent and educated, (*e.g.*, in printing presses and post offices) that one could utilize Arbitration Boards with any chance of success. It is preposterous to suggest, for example, that an Arbitration Board could be established for settling the disputes which arise in the Bombay cotton mill industry, for who is going to enforce the terms of arbitration which must be based on the demands of the representatives of the employers and of the employees—as experience has shown that it is not possible at present at any rate to find any representatives of the mill hands who will see that the demands, if conceded, are enforced. Much more can be said for Conciliation Boards and Whitley Committees. Experiments with these may well be made in Government printing presses and on the railways, and only when sufficient experience has been acquired should the experiment be extended to other trades and industries.

Patchwork labor legislation at all times is unsatisfactory and places undue hardships on certain classes of employers while frequently failing to end the worst abuses. Detailed and comprehensive legislation is nevertheless difficult and cannot be carried out unless based on elaborate investigation. It rests with the economists and social workers of India to carry out scientific investigations which will prove of value to the Legislature. Meanwhile, the responsibility of Government for conducting such enquires still remains. The action of the Government of India in establishing a Labor Bureau under the Board of Industries and Munitions and the appointment of a Labor Advisory Board and a Labor Commissioner by the Government of Madras are steps which are to be commended, but what is required is something more comprehensive, something

which will place social workers and Government in close touch with one another. Periodic labor conferences between employers, labor leaders (so far as they exist) social workers, economists and officials could conveniently precede the establishment of a Central Labor Advisory Board (which to ensure the confidence of the people should have representatives from each of these classes) and the drafting of an Indian Labor Code embodying the labor laws for all trades and industries in the country. No amount of international legislation can be a substitute for the framing by India of her own labor laws. It is only those who are living in this country who know her interests best; and, provided the voices of all classes and interests can be equally heard, legislation based on the deliberation of those persons is infinitely superior to legislation by outsiders.

DISCUSSION OF PAPERS ON LABOR PROBLEMS

Mr. H. A. HANSON said that he was very strongly convinced of the importance of investigations like the one the results of which Professor Lyons had given in his paper. All must be agreed that more should be done along this line, and that this Association should encourage such effort. He would like, therefore, to suggest to the local secretaries for the next meeting that they devote a whole session of the Conference to a consideration of this question and that any preparation through the Committee should arrange to have similar careful investigation made by as many competent investigators as possible throughout various parts of India. The results of such investigations could be presented to us in such a session with very telling effect. He would suggest that careful work covering a large field might eventually have the effect of convincing those who gave very little weight to the results of such investigations. In spite of the unfavorable reception of such investigations in Madras the investigators should not allow themselves to become discouraged and we should do all that we could to encourage this work.

With regard to the suggestion of Mr. Kanungo of Indore that, in order to raise the standard of living, messes should be started in the mills for the workers, the speaker said he would like to suggest one point that ought to be guarded against. With the advent of great industries we should find many forces introduced which are destructive of family life and any arrangement which would tend to separate the men from their families even more than they are separated at present should be looked upon with disfavor. The sanctity of family life must be guarded. This, of course, did not mean that he opposed sanitary and wholesome arrangements for the preparation and eating of such meals as the laborers must take at the mill. But he was opposed to any arrangement that would result in their taking all their meals at the mill.

With regard to Professor Burnett-Hurst's paper, he considered it very interesting, and wished to congratulate him on the able study he had given the Conference. He did not believe, however, that India's present position made it unnecessary to provide Labor Employment Bureaus for India's laborers. One of the great drawbacks in Indian labor was its extreme immobility. Labor Bureaus maintained by Government would be very useful in promoting this desirable mobility of labor. He was glad that Professor Burnett Hurst had touched upon the problem of child labor, for Indian leaders were not writing about this subject at all. All the material he could find, came from the pens of Englishmen who were reporting all their work as factory inspectors. He thought that here was a great opportunity for members of this Association to serve India. India needed an awakened conscience in this matter of child labor, for the evil was likely to be increased rather than decreased in the years immediately ahead of us, and if no one raised his voice on behalf of the children they were going to be exploited just as they had been in the West. In conclusion he said: "You who are here can mould the thinking of your students very largely on this subject. You can give your help to save large numbers of children by showing the evils of this practice. I hope that in the future Indians will take a real interest in this important subject."

MR. GYAN CHAND said that India should have a labor code of its own. Too much had been made of the joint family system and caste system in India. He associated himself with Professor Hanson's remarks. He was of opinion that in the present industrial struggle it was not possible to preserve the cottage industries. He thought that the question of poverty in India would have to be considered along with the question of the increase in population, and he was in favor of restricting the population.

PROFESSOR KARVEY said that if they found that the average income in the poor families fell short of the expenditure, they ought to find out the causes for that. He agreed with Mr. Nanda that whereas the labor movement in the west aimed at political power, the labor movement in India only aimed at increase of wages. But he thought that what had taken place in Europe was bound to take place in India also.

One of the reasons for the frequent strikes was the fact that the employer lived in an atmosphere which was on a higher level than that occupied by the laborer. What was wanted was a sympathetic attitude on the part of the employer. The second reason was the inability of the wages to keep pace with the increase in the prices of foodstuffs.

MR. SHAH of Bombay pointed out that the labor charges at present had increased 100 per cent, and the discontent of the laborers even after such large increase was just the same as before. The laboring classes were addicted to liquor and other vices and were not bent upon increasing their standard of life. He thought the labor unrest was mostly due to persons who claimed to be leaders putting into the mind of the laborers what was happening in England or America. The wages have been increased and the working hours had been reduced and still laborers were not satisfied. If they wanted the Indian manufacturers to compete with outside market they should consider the point of laborers killing the industries by unreasonable demands and frequent strikes.

MR. B. L. V. BHIMPURE said he was of opinion that the common mess for factory laborers and the supplying of uniforms by the employers to the employees and of expenses to undertake travels, suggested by Mr. Kanungo, were if actually carried out, sure to increase the efficiency of the laborers and thus the total amount of produce. But he thought they had failed to consider an important peculiarity of labor, *viz.*, that the laborer retains his property of work although he sells his commodity labor. Therefore very few employers would like to make such an investment in him. Then again with regard to the common mess we had to take account of the caste restrictions and the vast difference between the food prepared by the laborers at home and that at the factory. With regard to the uniforms he would say that even if some of the laborers, in the beginning, might show a dislike, yet if these uniforms were decent, comfortable and sure to increase their efficiency, they would take to them.

The investigations carried out by Professor Lyons were most useful and should be continued by him and by some other members as well. Professor Thompson's "Economic Survey" would be of invaluable help in this direction.

Dr. SLATER said that one very important question raised by Professor Burnett-Hurst's paper was the legal recognition of Trade Unions in India. The history of the relations between the State and Trade Unions in the United Kingdom was long and complicated. They were actually prohibited in the beginning of the nineteenth century, and a long struggle for recognition reached its climax in the Trade Union Act of 1876. This protected the funds of Trade Unions, and provided for registration, and recognised their right to negotiate with employers on behalf of their members and to strike. But it expressly abstained from constituting Trade Unions as legal corporations with the right to sue and be sued. At that time the theory prevailing among lawyers was that legal corporations could only come into existence by the express act of the legislature (either general or special), or of some authority empowered to bring them into existence. But subsequently to 1876 there came a change in the legal opinion, and the decision in the celebrated Taff Vale Case, in which the Amalgamated Society of Railway Servants was cast in heavy damages for ordering a strike without due notice, was based on the legal theory that a body of men could become a corporation, legally responsible for its acts, merely by acting as an organised body. The Taff Vale Case was the chief cause that impelled the Trade Unions to create the present Parliamentary Labor Party, and its first and greatest achievement was the passing of the Trade Disputes Act, which made Trade Unions exempt from any legal penalties for any wrong or unlawful or injurious acts done by them in connection with a trade dispute.

In India there was, as yet, no trade union law, and in any case that might arise, like the action taken by Messrs. Binny & Co. against Mr. Wadia, the organiser of the Madras Labor Union, the judges would have to decide by the principles of common law, and there would be great uncertainty about their decisions. Hence the question of forming an Indian Trade Union law had become urgent.

The first, and most important question that would have to be faced would be whether India should adopt the principle of the Trade Disputes Act. With regard to this it had to be noticed in the first place that there was something repugnant to legal opinion, and even to common-

sense in putting any body of people in the legal position of being privileged to commit wrongful acts without liability to any penalty; secondly the Trade Disputes Act only got passed in the House of Commons because the Liberal Ministry wanted the Conservative House of Lords to take the responsibility of throwing it out, and the Peers declined that responsibility; thirdly, it would appear that the effect of the Act, had been to exacerbate to relations between employers and unions. Indian unions would no doubt demand the extension to them of the principle of the Trade Disputes Act, but he did not think this should be conceded.

A less important question which had been much discussed in Madras was whether membership of a trade union should be limited to actual workers in the trade or occupation, and whether the officers should be chosen only from the members, or whether outsiders should be permitted to hold office. This question also would have to be faced by the legislator.

MR. S. V. KANUNGO thought that trade unions came into existence when the laborers were handicapped in their fight for higher wages and that they were founded on the principle of competition. The time was ripe, however, for economists and politicians to proceed rather on the principle of co-operation than on the principle of competition. They had to bring home to the minds of both laborers and employers their common interests—that they belonged to one and the same economic organism. Referring to points in Mr. Burnett-Hurst's paper he said that it should be made necessary for the Factory Inspector to reside in a factory for some time in the year in order to ensure greater interest for the welfare of workers.

MR. JOSHI said that he had not wished to speak that afternoon, but Mr. Kanungo had by his remarks provoked him to say something. Mr. Kanungo was opposed to the legal recognition of properly organised trade unions because he thought that in the new era of co-operation which is dawning trade unions were quite out of place, that the need of to-day is not for large factories and trade unions, but of cottage industries and of co-operation. The speaker failed to see however why the organisation of trade unions should be looked upon as a declaration of war between the employers and workers. Would not trade unions properly organised and legally

recognised be materially helpful to employers wanting to understand the minds of their work people and to redress grievances before they ripened into strikes? People who imagined that the encouragement of cottage industries would enable us to do without large factories were laboring under a sad delusion. The factory system had come to stay in India, whatever the possibilities latent in cottage industries. We had only to try and anticipate, if we could, some of the evils found by European experience to follow in the wake of the factory system.

With regard to Professor Burnett-Hurst's proposal of prohibiting by law the employment of children under 12 in textile factories or in mines, he agreed that such children should not be employed for work under the surface in mines, but thought that provision must first be made for the education of all children under 12 and then the prohibition of their employment in mines and factories by law could follow.

PROFESSOR LYONS in the course of his reply said that unfortunately it was not feasible to prohibit child labor under existing conditions and deprive the working man of the income brought by his children. The fundamental question was the problem of the subsistence wage, which was raised in his paper. He was in favor of the Association making investigations in the directions suggested by him. They should try to arouse public opinion if they thought that the laborers were not getting the minimum wage. He was in favor of the prohibition of child labor; but before it would be practicable the wages of adults must be increased sufficiently to enable the working family to have at least a subsistence income.

MR. GULZARI LAL NANDA said that the factory Act should be extended in its scope, as many factories were not under any sort of supervision. They should have an Industrial Disputes Act in India.

PROFESSOR BURNETT-HURST replied briefly. He said that the chief criticisms of his paper centred round the question of the prohibition of the employment of children under 12. The loss of family income which would result from such prohibition should be met by raising the wages of adult laborers sufficiently to enable them to support their families.

FAMINE AND EXPORT

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The first thought I desire to suggest to you is that there is reason for apprehending that the famines which have to be provided against in future may be of a somewhat different character from the famines which have marked Indian history in the past. The dominant causes for the famines in the eighteenth and earlier centuries were twofold, *viz.*, first the variability of the monsoon causing shortage of grain in particular areas and secondly the deficiency of transport. The chief characteristic of the condition of affairs in India had been that while there was famine in certain districts there was abundance of cheap grain in other parts of the country. The habit in India had been to store up grains during periods of good monsoons as a method of safeguard against scarcity in bad years. That had been the basis of the famine policy of the Government of India. The official idea with regard to famines had been that the dominant symptom of famine was not absolute deficiency of grain, but local high prices and failure of purchasing power of the people. Accordingly the remedial measures adopted were of the nature of providing employment and supplementing that employment by gratuitous relief and by facilitating transport of grains from districts which had them in abundance. The success of that policy rested

upon the continuance of the old habit of storing a considerable quantity of grain locally. But the success of that policy itself made people feel that in case of scarcity they could depend upon Government to procure supplies from other parts of India. Hence the economic motive for carrying over stocks of grain, and maintaining local reserves, was seriously weakened. The habit still persists, but is decaying; and if it disappears the foundation on which the success of famine administration rests also disappears.

Let us now consider the experience which India has passed through recently. In 1918 there was something like a 35 per cent deficiency in the grain produce of India excluding Burma. It was not sufficient merely to provide relief by employment or money grants or by facilitating transport from one place to another, since this only effected a shifting of the burden of lack of food from one part of the country to another or from one section of the people to another. Therefore in the famine of 1918 it was necessary to take further measures in the direction of increasing the available supply of grain for India as a whole. That was done by prohibiting the export of grain, and by appropriating the surplus of the Burma crop for Indian use and by endeavoring to obtain supplies from Australia. The measures actually taken were successful, and though there was a great rise of prices, suffering and distress were effectively minimised.

Prohibition of export was a necessary measure then; but now we have to consider whether it is a right policy to prohibit or hamper export as a permanent measure in view of possible future deficiencies of crops. One of the reasons why I considered this an important question is the existence of a general sentiment, particularly among the urban classes in India, in favor of a general and permanent prohibition of export of food grains

from this country; and the idea which is widely current is that prohibition of export is likely to be helpful in increasing the available food-supply for the people of India. In 1918, as soon as it was clear that there was going to be a deficit of grain in India, I was strongly in favor of prompt prohibition of exports of food grains. My opinion was based not only upon consideration of the fact that there was going to be a deficiency of grain in India, but also upon consideration of the peculiar position of world commerce and trade. The war, by creating superabundance of money and scarcity of commodities, had brought about a very great enhancement of prices in the world markets outside India, and at the date of the Armistice the average level of prices was so much higher in the outside world that, if export had been allowed, India could have been easily drained of its available supply of food. But in future years we must gradually reach equilibrium of prices between India and the outside world. With the reaching of that more normal commercial position the great argument for prohibition of export disappears, and we must look at the question afresh.

The most vital factor is the effect of prohibition of export upon production. Some of those who advocate either prohibition or hindering of export of grain base their opinion upon the theory that the Indian cultivator is in no way to be influenced by the condition of the market. Therefore, they hold, the quantity of grain produced is determined purely by meteorological causes, by the favorableness or unfavorableness of the season, and is not at all dependent on economic stimulus. I cannot accept that theory. In India the ordinary cultivator is perhaps less responsive to economic stimulus than the cultivators in many other countries, but, nevertheless, sooner

or later he must respond. If export is prohibited, before long the Indian cultivator will so restrict the acreage under food crops that the produce in normal years will be sufficient to meet Indian requirements. We cannot expect the Indian cultivator any more than any other cultivator to go on producing food grains if they are neither going to be consumed under ordinary circumstances within the country nor to be exported. Hence, my opinion is that anything like a permanent prohibition of export of food grains from India will inevitably operate in the direction of bringing down production, so that the normal production of a reasonably good year will only be equal to a year's consumption. The consequence would be that when India had to face a bad year the deficiency would be terrible, and the power of meeting it on old methods would have disappeared. Therefore, I regard prohibition of export as being the surest method of courting disaster. What applies to prohibition of export in a milder degree applies to all measures which tend to diminish export. It appears to me that the fundamental idea of all Government policy must be, apart from carrying out the established measures in dealing with famine, to increase production, primarily of food grains, but also of other commodities; and to permit their free export, both in order that there may be a margin of production over consumption in normal years, and in order that India may gain purchasing power to enable her in times of emergency to draw grain from outside.

I am not, however, prepared to say that there is nothing the Government should do with regard to export with the object of famine prevention except to leave it uncontrolled. I desire to draw the attention of the members of the Association to the very full discussion which the question of increased supply of

food received just a year ago at Pusa at the meeting of the Pusa Agricultural Conference. The report made by the Committee of which Dr. Harold Mann was chairman was extremely valuable, and its presentation ought to mark a new epoch in the history of Indian administration with regard to famine. At Pusa we considered also various items of Indian export trade from the point of view of famine prevention. It is well known that India suffers to a great extent in many parts from a deficiency of phosphate of lime, the chief constituent of bones. Therefore we came to the conclusion at Pusa that the export of bones ought to be prohibited as soon as Indian means of utilizing the bones for manurial purposes had been developed. We also decided that the export of some other manurial substances, such as fish manure and poonacs or oil cakes, should be steadily discouraged by export taxes, with a view to the ultimate retention of the whole of these manures in India.

Another idea which has been very largely discussed in agricultural circles is the proposal for an export tax upon raw cotton. This idea no doubt will be agreeable to a considerable section of Indian opinion, because an export tax upon raw cotton tends to encourage the production of Indian manufactures. Further, this would operate not against Lancashire, which uses American cotton, so much as against Japan which is largely using Indian cotton. Therefore that is a measure which is politically practicable. From the agricultural point of view it is urged that the very high prices of cotton which were ruling recently tempted the ryot in many districts not only to sacrifice the growth of food grains, but also to depart from sound agricultural methods by growing cotton again and again on the same land instead of observing a proper rotation of crops.

Whether an export tax on cotton would be beneficial or not would depend very largely upon the use made by the Government of the funds so obtained. It is desired that the proceeds of such a tax should be used for purposes of agricultural improvement. The agricultural departments of the various Governments of India are starved of funds like almost every other public service. I am of opinion that India groans under the oppression of insufficient taxation, and I think it is desirable that some additional source of revenue should be obtained in order to enable the agricultural departments to give Indian agriculture the service which they are capable of. If the money were well utilized the loss which falls upon the cotton grower would be more than neutralized by the indirect advantages of greater Governmental assistance in the selection of good strains of cotton and in the diffusion of knowledge of better means of cultivation. It appears to me that an export tax on manurial substances and on commercial crops of India which compete with food crops can be used as one part of the machinery for increasing the normal production of food.

In conclusion let me emphasize the fact that the country which has an abundant supply of food and which is best provided against famine is the country which normally exports food to other countries. I feel that India is in danger of a short-sighted policy of selfishness, if when other countries are suffering from scarcity India will not allow its surplus to feed those in need. Such a policy of exclusiveness and national selfishness can only react to the injury of the country which is animated by that spirit. The prosperity of India will be better served by selling her surplus to other countries where there is greater demand and thereby developing India's productive power so that in times of emergency India may be in a position to meet any deficiency due to want of rainfall or other causes.

DISCUSSION OF PAPER ON FAMINE AND EXPORT

PROF. JEVONS said that the proper solution of the question of food export was of the greatest importance to the future of India. This was essentially a subject in which the politicians should look to the economists for guidance. As Dr. Slater had pointed out, if they pursued a policy of always prohibiting the export of food, they really damaged the interests of their own country by discouraging the cultivators from cultivating foodgrains on a larger number of acres than the population of India normally required. They would be destroying what might be regarded as a reserve of production which would be brought into use in times when the yield of crops was low in a bad season. The experiences of the past two years were quite unusual, and were the result of the Great War. There had been an enormous rise of prices in Europe and other countries and an extraordinary shortage of production. Some regulation was undoubtedly necessary; but he had always thought that Government might have used an export duty of, say, six or seven rupees per maund to discourage exportation, and with advantage to the Indian revenues. It would be possible to regulate the amount of food-grain which India could allow to go abroad by means of an export duty, varying with the price in accordance with a sliding scale.

Coming to the question of permanent total prohibition of export, he said that India should not adopt what might be called a selfish policy of isolation from the outside world, as in the end it would not prove to be the best system. The best course would seem to be to expand the policy which Government had successfully adopted for meeting famines from resources within the country. That was what

Dr. Slater meant when he said that India should link herself with the grain trade of the world. The worst features of famines in India had been averted by linking up each local district with other parts of India as a whole by a net-work of railways. Why not proceed to link up India more completely with the grain trade of the world? The grain trade of India was not so well organized as in other countries. They found that in America and Australia grain was handled in bulk by elevators. There was no packing of the grain in bags. The handling was done by automatic machinery, and the grain shipped in bulk into the hold of the ship. An experiment in the use of elevators was being made in India between Lyallpur and Karachi. The construction of these elevators was started before the war, and he did not know whether they were in working order as yet.

The policy he would suggest would be that first of all there should be a great effort to improve agricultural methods, so that there might be an increased outturn per acre. He thought that an export duty might be used as a more scientific way of regulating export than total prohibition when prices were high. In conclusion he advocated the development of the Indian grain trade to keep it in touch with the grain markets of the world, and suggested better methods of providing adequate storage capacity by building large elevators at great commercial centres like Cawnpore and Lyallpur, and also in the port towns.

MR. JOSHI said that the figures of production of food-stuffs from 1899 to 1914 showed that the same had increased sympathetically with the rise in the world prices. The effect of total prohibition of the export of food-stuffs must be to decrease their production in India. The cultivator would then turn to the production of raw materials, the export of which was not prohibited. Thus the security against famine which was the main reason for the prohibition of the export of food would not be attained. It had been suggested that a duty on oil-seeds should be imposed with a view to encouraging the pressing of the seeds in India and the retention of the poonak for manure. That method of encouraging the development of the oil-pressing industry at the expense of the producer of the oil-seeds would be similar to robbing Peter to pay Paul. They should find better

methods of stimulating the development of their industries than imposing export duties and thereby injuring the export and hence the import trade of the country,

PROF. THAKORE agreed with Dr. Slater with regard to the prohibition of export of bones and other manurial articles. He said that Indian sentiment was not totally against the prohibition of export of foodstuffs and quoted the authority of *Artha Sastra* and the *Puranas*. The Indian mode of treating the subject was to store up the food and fodder requirements for a year. Out of the surplus a part went to the state as land-revenue. Another part was set apart for social purposes and charitable objects. The remainder was allowed to be exported. All agricultural countries must follow the policy of storage. He was in favor of developing the transport facilities and said that India should have her own ships. The sooner they proceeded to build up shipping for coastal transport between one part of India and another as well as for international transport across the oceans, the better it would be for their productions.

Professor RANGASWAMI AIYANGER expressed his entire agreement with the remarks made by Dr. Slater and deprecated any policy of prohibiting absolutely or of restricting the export of food-grains from India. He recollected instances from his experiences in Travancore supporting the various generalisations put forward by Dr. Slater. The danger was not at all a remote one. He instanced the case of Travancore, with an extensive seaboard, and surrounded by British territory, producing barely half the food grains required by its population, but producing an increasing quantity of non-food crops.

There was, however, one aspect of the policy which Dr. Slater condemned—and a most important aspect too—which had not been dealt with and which he should like to press. It was the bearing of such a policy on Land Revenue assessment. He must emphasise the fact that a policy of total or modified prohibition must affect most prejudicially the cultivators in areas under thirty years or twenty years settlement, especially as resettlements were going on continuously, in some district or other, in provinces like "ryotwari" Madras and in Native States following a similar land-revenue policy. In practice, every settlement officer looked not only backwards but also forwards. If, therefore, any settle-

ment were undertaken hereafter, *after* exportation of food-grains was restricted or prohibited, thereby depressing the prices of food-grains in the country, the result would be that the rates of commutation calculated on the recent years of phenomenally high prices would come into force in a period in which, thanks to the policy of restricting or prohibiting export of food-grains, the prices of food-grains would be depressed. The consequences would be clear. The result of the mischievous policy against which Dr. Slater had protested, would be equivalent to a substantial increase in the taxation of land in the already heavily taxed ryotwari and similar tracts in India. Whether one was prepared to agree with Dr. Slater's somewhat provocative statement that "India is groaning under the tyranny of light taxation" or not, no one would deny that it was a most serious matter to the poor agrarian population, if, as a result of a tariff policy based ostensibly in the interest of the consumers in the country, a heavy load was added silently to the burden of the land-taxes that the agrarian population already has to bear. Such an increase in the burdens on land, and the way in which the burdens have been imposed, must have a very demoralising and even dangerous result in India.

MR. TOWNSEND (of Punjab) hoped that the interest of producers of exportable articles such as wheat would not be overlooked in considering this matter. Restrictions on export of their produce really meant that they would get less, for it than they were entitled to and according to the level of prices prevailing in the world at large. That the cultivator knew what crop paid him and what did not admitted of no doubt. He instanced the decrease in indigo cultivation in the Punjab when the crop fell in price owing to the introduction of synthetic indigo. The Lyallpur elevator, he said, was working, though not up to anything like its full capacity and the result of its working so far was not unhopeful. But the present restrictions on export made it impossible to place a cargo of elevator wheat on the London market. Till that was done it was impossible to say even tentatively if the experiment had a prospect of success. Some speakers had advocated an export duty on cotton. It should be considered whether such a duty would not merely add to the present large profits made by the Bombay mills without reducing in any way the price the consumers paid for their

cloth. New mills would be very expensive to erect now owing to the increased price of materials. Therefore the operation of the ordinary economic law, that increased profit meant more competitors for it, would be certainly greatly postponed, if indeed it ever actually came into operation in this case.

MR. DEOLE wanted to know whether there was any such argument advanced by anybody in this country as that the export of food-grains should be stopped altogether. It was not clear to him whether they were beating a horse which was in existence or one which was not in existence.

DR. GILBERT SLATER said that possibly in Bombay the horse had not arrived; but in the city of Madras from which he came it was very much alive and was kicking. He expressed gratification at the general agreement with the fundamental principles which he put forward. He wished to make it clear that in the year 1918 he was strongly in favor of an emergency measure for prohibiting the export of food-grains. With regard to the modern methods of storage he said it was being dealt with in the committee referred to at Pusa. In reply to Mr. Joshi's remarks he said that an export duty on cotton would to some extent discourage the growth of cotton on lands which were not suitable for cultivation of cotton. If they used the revenue obtained by a tax on raw cotton for the improvement of agriculture, what the cultivator lost in one direction he would gain in another. As regards the contention that an export duty on cotton would only put more profits into the pockets of Bombay mill-owners, he said it would also increase the number of mills in India and the efficiency of production.

PROS AND CONS OF CURRENCIES IN INDIAN STATES

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COMMERCE MINISTER, INDORE STATE

A State values the right of having a currency of its own as a means of regulating the economic life of its people. There are numerous instances in history of the economic effects produced by the currency policy of the rulers. In these days of rapid communications and increased facilities for trading, it is proving difficult for economically weak States to exercise their right in the case of currency.

Mainly owing to these circumstances, there are very few States in India now left which have their own currency. Hyderabad alone seems to have a complete system of currency, including the paper currency. Of the other States, which possess currency, some have only subsidiary coins and a few make accounts only in their own currency. Some indeed have precious coins for ceremonial purposes only.

Apart from the inducements offered by the British Government, such as the Native States Coinage Act of 1876 or the obstacles placed by it, such as the stopping of the free import or export of gold and silver, the main cause which has ousted the currencies of the Indian States is an economic one. Along with the rest of India all of them are mainly

agricultural states, with the consequence that the more prosperous of them, which have any kind of trade, export their surplus, or even more valuable, of the produce from the land, and the economic condition of their subjects likewise does not admit of their making up the balance of trade by imports in raw materials or manufactures only. It is made good by means of the British Indian Currency, or to a smaller extent by means of bullion or paper.

The inroads of foreign currency, however, affect the economic life of the people in several ways and weaken the power of its government.

(1) When any class of the people buys any commodities with a foreign coin, it is the foreign merchants who give their primary and secondary wants, because it is with that money that one has to buy the products of the country.

(2) The manipulation of the prices for currency being in alien hands, the problem of the rise or fall of prices depends upon the will of the other power. The ruler of the land has to restrict or cease the operations of his own mint and the user of the foreign coin is dependent upon him for the valuation of his goods and labor. If foreign merchants withhold buying from the ryats at the time they want money to pay, say, state dues, the ryats have to submit their goods and labor to the valuation of the foreign merchants.

(3) According to the ratio fixed by the British Government between a sovereign and rupees, *viz.*, 1 to 10, and the quotation for gold 118s. per oz. fine, the parity of the rupee with sterling was about 2s. 9.3d. whereas the open market quotation of the rupee was only 1s. 7½d. about the the beginning of December. By adopting thus a foreign currency, a state shares its vicissitudes of fortune.

To keep itself aloof from the results noted in the preceding paragraph, "a ruler of a State has to choose one of two alternatives. He may either lead a gallant retreat of his people to what may appear a primitive condition, namely ask them to exchange with one another in kind, and pay him the entire revenue also in kind", or prevent the use of foreign currency within the State. Owing to the paramount position of the British in India, many a ruler would have shrunk from taking the latter step, while the opening of communications would make the former impossible. This condition would have to be maintained until the state were able either to meet its internal wants, which would not be a practical proposition, or so to organise its trade as to meet the balance of trade in its favor by exporting manufactures, making investments abroad and importing bullion.

It is, however, not a fact that the introduction of the British Indian Currency is a necessary result of the trade relations with British India or foreign countries. Many an European country or state which has its own currency has such relations, but it has maintained its own currency. For instance, the producers of English coal are paid in English money and the growers of French wine in French money. But the French consumers of British coal must pay for it in English money and they must pay this money in England, and conversely, the same is the case with the French wine. This transaction is the business of the exchanges, and it has to be undergone even when different foreign countries have identical currencies.

Applying these truths to the conditions in the Indian States, it is easy to see that without resorting to the extreme step of stopping all intercourse with the outside world, or rather limiting its opera-

tions to barter, thus eliminating the need of money, a state could maintain its currency by maintaining an exchange in addition to making penal the use of foreign coin in its territory. This step will procure to its ruler the immense power which the possession of a currency gives.

As the learned author of *Tax-Payment-kind in Travancore* has observed, the mint was a great power for good in the hands of the King. When a nation, in whose country production is cheaper, tries to connect itself with another and competes with its produce in its indigenous markets, the king of the latter reduces the value of the current coins either by procuring cheap bullion or by mixing cheaper metal (alloy), the value of the standard coin, of course, remaining the same. The food-selling classes, knowing the depreciated value of the coin, give less than the usual quantity, which not being sufficient for the purpose of the foreign dealers compels them to raise the value of their articles. It may be mentioned that this depreciation is so adjusted as to make it impossible for the foreigners to sell at a lower price than their indigenous brethren. The indigenous dealers, too, will have to raise their prices, having like the rest to buy their food at the enhanced rates. This would apparently leave their foreign brethren at a continued advantage. But the advantage is countervailed, as it were, by the King investing the gain he has received by cheap minting—which is a kind of unearned increment to the State revenue—with the handicapped indigenous classes, and enabling them to sell their articles at a rate not higher than those of the foreign dealers. If such an unfair competition be started by a section of one's own Society under the operation of blind and ignorant selfishness and an indigenous industrial class raise the price of its labor

—which, however, rarely happens—then too, the King can reduce the value of the coins and invest the mintage profit with other classes. The mint is, he continues, “the quickest means by which all classes of the society could be kept beyond harm by any who would be disturbers of the social cosmos and equal rights secured for all.”

Can this advantage be recommended to be given up for gaining monetary peace, which is supposed to be securable by the universalisation of a currency? But this is a chimera. “Though” says, Lord Goshen in *The Theory of the Foreign Exchanges*, “one system of coinage were adopted for all countries, claims on foreign countries would nevertheless vary in price, and would still be either at a premium or at a discount, according as there happened to be at any moment a greater or less demand on the part of such as desired to transmit funds abroad as compared with the supply offered by such as had outstandings abroad which they were entitled to draw in”. It may happen that the different foreign countries have identical currencies, but the essence of the operation is the transfer of money power from one country to the other. (Tate’s *Cambist*). Otherwise we should have a multitude of parcels of coin flowing from one country passing in transit, a similar multitude coming from the other country, and the mints of the respective countries would be constantly employed melting and recoining foreign money. To avoid all these risks and inconveniences, the foreign bill of exchange was invented, and it may be traced back to the middle ages and probably to classical antiquity”. So the elimination of the currencies of the Indian States cannot solve the problem of the exchanges, which are commonly believed to adversely affect the interests of the producers. Indeed, even

in British India or in other Indian States, where one currency prevails, it has not disappeared. The introduction of some such system in India as that of the Latin Union, by means of which the countries comprised in it, agreed that their coins should pass concurrently in their respective countries, will certainly be a better solution than the doing away of the currencies of the Indian States. Another convenience to be devised would be to create such instruments of credit as were proposed at the recent Financial Conference at Brussels.

The crux of the question, however, lies in the economic effects of the operation of exchanges. Although it is an economic law that the exports of a country are paid for by its imports, account has to be taken of invisible imports. As Nicholson says, "We have to take account of payments in connection with freights, stock exchange securities, the advance of loans at the time at which the funds are remitted, the interest on the loans, the repayment of the principal, the expenses of Government abroad, or conversely receipts of tribute, the expenses of foreign residents, the obligations of banks, the profits on commissions of various kinds and other minor elements."

All these transactions cannot be done without resort to exchange. Although there are only a few Indian States, which have to pay tribute to the Government of India, there are many more of them, which have to receive the payments from it. Presumably this would be in the British currency. So also the balance between exports and imports may be, to a certain extent, paid in the coins of that currency. These will overflow in the treasuries of the States, if not in the pockets of their subjects. And it being a larger currency and a token one, may by reason of its utility and under Gresham's Law,

replace the States' currency, which, it is assumed, will have to be of an intrinsic value, as outside the States its value will be that of the metal in it. And even if the use of a foreign currency should be made penal in a State its subjects would be at the mercy of the money-changers.

The aftermath of the war has shown that do Government what they may, the rate of exchange will follow the laws of supply and demand. It is, however, possible to check the profiteering tendencies of the exchange bankers or smaller money changers, by resorting to similar operations as are undertaken, say, by the Government of India in selling Councils or Reverse Councils.

An operation of this nature will not be difficult for the States, for the Indian States generally export more goods than they import, including bullion and British currency. This happens both on account of the raw materials, including food-stuffs, which they have for export, and also because of the large investments which the States and their subjects have in British India. The result of this would be that usually the demand for exchanging British rupees for State coins would be much larger than the demand for exchanging State coins into British currency. Even if the stock of state coins is exhausted new ones can be coined by purchasing silver with the British Indian coins in the stock. On the other hand if the stock of British coins is exhausted, a state has only to melt some of its coins and to sell the silver for British Indian rupees and thus meet the demand. The loss, if any, in such transaction can be met out of the profits on coinage, which should certainly be, to a certain extent, kept as a reserve for such a purpose. It will not be an entirely idle reserve, but a large portion of it may earn interest by judicious invest-

ments. Subject to such a reserve being kept and the State offering to exchange currencies to a certain extent, the operations of the money market will be kept in check. An independent coinage by a state presupposes that its freedom of export and import of precious metals from Indian states outside India shall not be restricted by the operation of the British Sea Customs Duty Act.

Coming now to the practical aspect of the question, it is to be remembered that Hyderabad alone has a complete system of currency, consisting of gold, silver and copper coins and the paper currency. They alone are the legal tender in the State. Owing to the compactness of the territory and the strict enforcement of the currency laws, the Hyderabad currency has not had to suffer inroads of the foreign currency. It has its exchange problems, but the State controls it by means of the manipulation of the currency.

Travancore has a silver coin called *chakram*, but it has been driven out of circulation and is only used for accounts purposes. The main reason for its having gone out of circulation is due to the fact that Travancore exports more raw materials than it imports, and its people are not rich enough to meet the balance of trade in its favor by manufactures or making investments abroad, which would have counter-balanced the balance of the trade in its favor, and to the absence of any penalty against the use of foreign coins.

Some other States which have their own coins, have closed their mints, which has led to the appreciation of their coins, which are still current. Some States have altogether closed their mints and some for a period only. The States of these classes found minting to be an operation resulting in loss, and so

gave it up under the immediate economic pressure. The sea-board being until lately entirely under the control of the Government of India, the States had no liberty as regards the transactions in precious metals, from the time they were controlled by the British Government. The disparity between the value of bullion and coins, the rise in the value of silver, and the freeing of the sea-board to a larger number of States, therefore, have revived the interest of the Indian States in the currency problem. It is gradually being realised that apart from the economics of the coinage, a currency has its own economic advantages, which no Government could afford to ignore.

The successful and useful propagation of a currency is not an easy matter. It is one of the most intricate, and owing to its ramifications, a vital question to the economic life of a State. It is, therefore, only such States as can command expert advice that may aspire to have their own currency. The main disadvantage from which any currency suffers is with regard to its intrinsic appreciation or depreciation apart from those happenings, which are due to local and temporary causes. To avert or modify the effects of the former results, the existence of a reserve and and of banking facilities by a State, or controlled private agency, would be highly useful. A reserve can be built up out of the profits on coinage.

On the other hand, a state which has its own currency has many semi-economic as well as purely economic advantages. Among the former, the following are the most important:—

- (a) Freedom from the effects of a manipulated currency, brought about to meet the requirements of the British Government and,
- (b) A similar escape from the other Acts of the Legislature of British India affecting its currency.

As regards the purely economic advantage, the profit from the coinage is not a mean one. The greatest profit is derived from a paper currency which, if kept within bounds, is a most advantageous form of currency. Then the profits on the gold, silver and other coins of baser metals will also be considerable. It will all be retained by the state minting its own coin.

But the consideration which should weigh most in favor of a State having its own currency, is the power which it gives to the latter to afford convenience to its subjects in the daily economy of their lives. When the ryats in the Punjab grew suspicious of the paper currency, the Government of India at once minted a gold Mohur, while the Governments of Indian States looked helplessly on. The appreciation of the British Indian rupee in its ratio to the British sterling in the nineties of the last century and the recent change of its basis by linking it to gold, which resulted in adding to the burdens of the ryats, and among others in causing depreciation of their hoards, and lately of the investments, respectively, have equally affected such Indian States as have adopted the British Indian Currency.

The problem of a currency of its own has no interest to a State which is not of some respectable size and which is not more or less compact in area. Such States as by agreement with the paramount power have permanently given up their currencies, have temporarily lost their interest in it. Those States which can resume their coinage, and which still possess one, cannot but have an abiding interest in the question.

STABILITY OF EXCHANGE

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Foreign exchanges are a mechanism by which money of one country is changed into the money of another. The fluctuations in the rates of exchange are caused by variations in the relative value of the currencies of the countries between which exchange is quoted. These variations are generally due to (1) the Balance of indebtedness, (2) Loss of credit, (3) Depreciation of the currency, (4) Rate of interest in the two countries, (5) Distance between two countries, (6) Panic, and (7) State of emergency like that of war. One more factor which ought to be taken into account is the relative values of the two metals, if the currencies of the two countries are in different metals. Of these factors the two most important which are affecting India heavily are the first and the last, viz., the balance of indebtedness and the relative values of gold and silver.

During the war the most important factor affecting exchange, viz., the balance of trade, was favorable to India. This balance would have been settled by the import of precious metals if conditions had been natural and normal. But on account of war, restrictions were put upon the movements of the precious metals. When such was the state of things silver began to appreciate. Before the war silver used to be in the neighborhood of 27*d.* per ounce. The rupee could remain a token coin till the rate reached the limit of 43*d.* per ounce. After this limit was passed, in order to prevent the melting or export from India of silver rupees, the

Government of India, as they said, found it necessary to raise the rate of exchange. The first change was made on the 20th December, 1916, when it was raised from 1s. 4d. to 1s. 4½d. for immediate telegraphic transfers. Then gradually it was, as is well known, raised to 2s. 4d. on the 16th December, 1919, the different rises being 1s. 4½d. (10th January, 1917), 1s. 5d. (29th August, 1917), 1s. 6d. (12th April, 1918), 1s. 8d. (13th May, 1919), 1s. 10d. (12th August, 1919), 2s. (16th August, 1919), and 2s. 2d. (25th November, 1919). When the Government had to raise the rate of exchange from 1s. 6d. to 1s. 8d. in May 1919, they felt that the exchange situation was departing widely from its normal position, and therefore they appointed a Committee presided over by Sir H. Babington Smith, on 30th May, 1919, to advise the Government in regard to the future of Indian Exchange and Currency. The Committee submitted their report on the 22nd December, 1919, and it was published on the 2nd February, 1920.

The circumstances under which the Committee sat were abnormal and artificial as immediately following a catastrophic war, and sufficient time ought to have been allowed to elapse before a true perspective of the situation could be taken. It was not a time for suggesting modifications of the existing system which was itself objectionable in that: "The rupee", as Sir David Barbour said, "which was the main coin of the country, ceased to be of the same bullion value as its currency value". The Committee ought not to have suggested such a large change in the rate of exchange as a permanent solution. In emergencies like the last war, measures are and have to be taken which have victory and not sound currency as their goal. And if the latter is drastically affected by measures taken in view of the former the best way is take such steps as will undo the measures and

bring about normality. For munition supplies and expenditure incurred in India, Mesopotamia and elsewhere on her behalf, England was hugely indebted to India and therefore the value of the rupee in terms of sterling rose. To this was added the abnormal rise in exchange due to the enhancement in the gold price of silver which was greatly in demand in India for coinage and in Europe for small coins. The true remedy for the difficulty would, according to Sir David Barbour and Mr. W. E. Preston, representative of the Eastern Banks' Association, have been to reduce the balance of indebtedness and the demand for silver. The latter was prepared to say that there was no harm in the Government of India making a little loss on exchange and the note inconvertible for the time being.

Taking the Committee's measures even as a temporary solution they have not only failed to achieve the intended object, but on the contrary, have proved disastrous to the best interests of the country. At the height of the export season the market was never able to support a two-shilling gold exchange. Even the sale of £55 millions of Reverse Councils, from 1st February to 28th September, 1920, has not strengthened exchange. The Government of India in their reply to the Bengal Chamber of Commerce admit that their inability to make 2s. gold rate effective even during the period in which Reverse Councils were being sold "was due largely to factors which could not have been foreseen". The consequence is what it is. The high rate of exchange has inhibited exports and stimulated imports with the result that the balance of trade which was highly in favor of India, has now become adverse to her. This is attributed by Government to "(1) the overstocking of the American and European markets, (2) the commercial

crisis in Japan, (3) the necessity for the continuation of the embargo on the export of food-grains, and (4) the inability of the continental countries, owing to their debased currencies and their debilitated financial conditions, to pay for imports. Those who have been in touch with the markets know whether the high rate of exchange was responsible for reducing exports or not. The other causes mentioned by Government were contributory, but the main responsibility of the exchange rate cannot be ignored. Now, silver having fallen in value and the balance of trade being reversed, the exchange has fallen to 1s. 5½*d.* and we don't know where we stand. The Government of India expect that the "operation of natural conditions will allow the eventual fixation of exchange at the level advocated in the report of the Currency Committee." Lord Meston also in surveying the Indian exchange position before a Manchester meeting is reported to have said that it "would not be in a day or year that the rupee would settle down to 2s., but the 2s. rate would eventually be reached".

Let us see by comparing the markets of gold and silver for the last six months whether there is any indication, however slight it may be, of the Government anticipation being fulfilled:—

	Gold (in London)				Silver	
	£	s.	d.		per ounce	
23rd July	...	5	8	9 ...	...	55½ <i>d.</i>
26th August	...	5	15	0 ...	...	58½ <i>d.</i>
30th September	...	5	18	4 ...	...	59½ <i>d.</i>
28th October	...	5	17	11 ...	...	52 <i>d.</i>
25th November	...	5	17	7 ...	...	47½ <i>d.</i>
23rd December	...	5	15	8 ...	...	40½ <i>d.</i>

On the 23rd December, 1920, the rate of gold in London was £5-15-8 per fine ounce and the rate of silver was 40½*d.* per standard ounce, '925 fine. The exchange on Bombay was quoted at 1s. 5½*d.* or 17½*d.* That means

on that day in London the £ sterling was valued at about 83 grains of fine gold, or 0.734 of the gold in the sovereign. A rupee would buy in London 6.1 grains of fine gold and 165 grains of fine silver would be equal in value to 5.2 grains of fine gold and that the rupee valued at 17½*d.* sterling is equal to 13*d.* nearly in gold.

On 23rd July the price of gold was £5 8*s.* 9*d.* and that of silver 55½*d.* per ounce. The exchange quotation per rupee was 1*s.* 10½*d.* The ratio of the value of an ounce of gold to an ounce of silver was 23.6 on July 23rd, and 34.8 on December 23rd. This shows how silver is depreciating in terms of gold. The value of the rupee at 22½*d.* sterling was equal to 17*d.* nearly in gold. So it is clear that the rupee which was 17*d.* gold in July is to-day 13*d.* gold in December, while Government want to raise it to 24*d.* gold. How is the end to be achieved? Due to inflation in India and famine in China silver is likely to go down rather than to go up. One cannot understand how stability in exchange is to be attained. The memorial for stability of exchange is, as a Paris correspondent of *The Times* said, yet to be erected.

The only remedy that will minimise many of the difficulties is to introduce a real gold standard with gold currency. The fear entertained in certain quarters that India will prove a veritable sink, has been dissipated by the recent happenings. During the course of this month gold and silver have been exported out of the country to satisfy the adverse balance of trade. Once the real gold currency is introduced in India and enough gold is given to her in proportion to her population, automaticity in the movements of precious metals in settlement of trade demand will be visible exactly in the form in which it is visible in England, France or Australia.

A REVIEW OF THE REPORT OF THE INDIAN CURRENCY COMMITTEE

MR. B. F. MADON

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The Report of the Indian Currency Committee of 1919 is a most astonishing document. The terms of reference expressly precluded it from considering whether the Gold Exchange System was the right system or not, and yet one of the recommendations practically amounts to displacing the Gold Exchange System as I shall show lower down. Its terms of reference confined it to an examination of the Indian exchange and currency system and practice, and yet it turned itself into a sort of "High Prices Committee" and made recommendations about currency that had their main justification in the present high prices of commodities, and its most outstanding recommendation—the change of the standard unit of India to 11·30 grains of gold from the 7·53 grains that it was ever since the memorable changes of 1894—is the most amazing recommendation that one could have ever looked for from a panel of English bankers asked to advise about currency. For this recommendation amounts to nothing more nor less than a deliberate debasement of currency for the purpose of adding to the resources of the Government. That English bankers should subscribe to such a proposal and that an English Secretary of State should adopt and act on them

shows how easily the cleverest men may be led astray by the machinery of the Gold Exchange Standard System. I know it will be disputed that the recommendation implies debasing. I shall be told that it was other people that had suggested a debasing of the rupee coin, and that far from debasing it this wonderful Committee has strongly set its face against it. It is true that the Committee has gone into the question of whittling down the silver contents of the rupee and have noted their opinion against it, but they have failed to see that the change in the metal contents of a *token* cannot be debasing, while what they have themselves recommended is debasing.

Let us see what debasing is and why it is practised and why such action is reprobated by all sound bankers and business men.

Debasing is practised by bankrupt states and rulers to increase their resources without adding openly to taxation. It is done by making more coin from a given weight of metal than is laid down by law for the standard coin of the country, and it is reprobated, because thereby the debtor class of the country, *i.e.*, whoever has to *make* payments, is benefited at the expense of the creditor class, the people who have to *receive* money. The latter get less than what is rightly due to them and are defrauded of their rightful due to that extent.

But these considerations do not apply to a token coin because whatever its contents may be, its value in payment of debts does not depend on its own bullion contents but on that of the standard coin to which the token may be linked.

The Indian Rupee is a token coin since 1894. Settlement of debts since that year has not depended on the silver contents of the rupee but on the gold coin with which it has been linked, *viz.*, the sovereign.

This is clear from the fact that although the average price of silver between 1895 and 1914 has been about 25*d.* and Rs. 1,500 (which equal 1,500 tolas of standard silver) would be intrinsically worth only £ 58 to £ 59 yet these same Rs. 1,500 have been freely accepted in payment as the equivalent of £ 100. That the Rupee was a token coin was very clearly stated by the Chamberlain Commission in paragraph 66 of their report where they stoutly defend the Indian Currency System from the charge of being a "Managed" system. They deny the charge and add:—

"The only point of the criticism that India's Currency system is managed in a sense that is not true of the currency of the United Kingdom lies in the fact that the Rupee is a token passing at a value above its intrinsic value and at the same time is unlimited legal tender. It is true that it is not practicable even to consider the limitation of the amount for which the Rupee is legal tender. In this sense, therefore, the system must remain a managed one. But we demur altogether to the idea that because it is to this extent a managed system it must be a bad system. It is not in fact, *possible for the Government of India to manipulate the currency for their own ends, and they cannot add to the active circulation of the currency except in response to public demands.*"

Government of India has done what the Chamberlain Commission said it was not possible for it to do, *viz.*, it has "manipulated the currency for its own ends", and added 12½ crores thereby to its revenues. However, what concerns us here is to show that the rupee was only a token in India's currency system, and represented a definite part of the standard coin. The standard coin cannot be silver; it must be gold, because since 1894 India has been placed on a gold standard. Let us again quote the Chamberlain Commission. They come to the conclusion (see para. 223, IV, of their Report) that

"The belief of the Committee of 1894 was that a Gold Currency in active circulation is an essential condition of the maintenance of the Gold Standard in India, but the history of the last 15 years shows that the Gold Standard has been firmly secured without this condition."

Whittling down the metal contents of the rupee would, therefore, not have been debasing, because it would not have varied the contract between debtor and creditor, as debasing is ordinarily intended to do. All contracts although nominally called so many rupees would be understood as for so many parts of the sovereign and not for so many tolas of silver. A man who had Rs. 1,500 due to him could still call for £100. There would be no injustice to any one.

Now let us see what the Currency Committee has done. They have changed the ratio of the token rupee to the standard coin (the sovereign) and thereby modified all existing contracts by the enormous amount of 50 per cent of what they originally stood for. Thus any who owned Rs. 1,500 had really to find £100, say 12,327 grains of gold. At the ratio recommended by the Committee, this man must now find the equivalent of £150 to settle the same debt. Thus the contract between debtor and creditor is vitiated by as much as 50 per cent. What is this if not a debasement of currency? When standard coin, *e.g.*, the sovereigns are debased, the relation between debtor and creditor is vitiated to the advantage of the *debtor*, and the action is most strongly reprobated in all countries that value their reputation for business integrity. When token coins are debased as the rupee now is, the relation between debtor and creditor is vitiated to the advantage of the *creditor*.

In every country the creditor class is the wealthier though numerically much the smaller class of the population, and yet any change in the standard of value, *i.e.*, any debasing of currency that makes even the wealthy class suffer has been reprobated as highly dishonest and immoral. What shall we say of this other change in India's Standard of Value? What shall we say of the other debasing that actually

benefits the wealthy creditor classes at the expense of the debtor class of the country, which means all its toiling millions. The Indian Government's own reports testify how deeply submerged in debt these masses of India are, and yet they have debased the currency of India to the extent of 50 per cent at the expense of these masses. The man-in-the-street is beguiled with talk of never allowing any debasing of the rupee, although the Member of the Committee must have known full well that in India's system this rupee was a token.

I have already said that debasing is practised by bankrupt Governments to increase their resources and that the change of the Indian standard unit recommended by the Currency Committee is really a debasing of the coinage by which the resources of the Government are increased by $12\frac{1}{2}$ crores. This wonderful Committee of English bankers and others do not seem to have been abashed at what they have done. They actually wish it to be counted for merit to them, because in paragraph 32 they tell us with evident gratification that "a high rate of exchange would result in further advantage in this direction (*i.e.*, materially improving the revenue position and enabling the Indian Treasury to do without further taxation." But they ignore the fact that these $12\frac{1}{2}$ crores of savings to the Indian Exchequer do not fall from the heavens. All payments India has to make abroad are ultimately adjusted by her exports. Home Charges are only one class of India's payments abroad. The Committee consider that the average annual amount of Charges will be £25 million. These 25 million will be settled by £25 million of exports. If exchange is at $16d.$ the Government would have to find $37\frac{1}{2}$ crores of rupees. If it is at $24d.$ the Government has to find only 25 crores and thus saves

12½ crores. On the other hand, the £25 million of exports that would have realised 37½ crores in the former case realise only 25 crores in the latter; and as the bulk of India's exports is the produce of the soil, it is the tillers of the soil that get 12½ crores less. So while the Committee blandly talks of the advantage of the revenues and the avoidance of additional taxation what they have really done is to put an additional burden of 12½ crores on India's producers.

This is *taxation in its most undesirable form*. It takes money from the pockets of the producer without his even knowing what is being done to him. If additional revenues are necessary, the Government ought to take them by open taxation in the usual way.

The evil does not stop there. It is not only 12½ crores that the producer is thus insidiously taxed. The exports of India go to balance the following various payments:—

(a) Home Charges of the Government.

(b) Remittances by British firms and companies, Steamship lines, Railways, etc., of their profits, etc., made in India or payment received for services rendered to India.

(c) Similar remittances by foreign firms, companies and individuals.

(d) Payments for imports on behalf of the Government.

(e) Payments for imports on behalf of the Railways.

(f) Payments for imports on behalf of the trade and industry.

(g) Payments for imports on behalf of the articles mainly if not solely consumed by the wealthier classes.

(h) Payments for imports of articles mainly consumed by the masses.

The imports have been divided into groups as above in order to show clearly the classes that benefit by cheaper imports. It will be seen that by the change in the standard unit, not only does Government benefit in its payments of Home Charges by 12½ crores, but the other classes (b) to (g) also benefit. If the

list of imports is carefully scrutinized, it will be found that three-fourths of the imports represent goods needed by other than the agricultural and laboring population. Therefore what really happens in this system of taxation through debasing of the currency is that, while the Government takes only $12\frac{1}{2}$ crores, the total loss to the producer through smaller receipts for goods exported comes to considerably over 100 crores, and there is a corresponding saving of several crores each to the classes (b) to (g). Why should the producer be thus mulcted of many crores of his hard earned rupees in order to benefit these other classes? If Government think they are justified in taking $12\frac{1}{2}$ crores from the producer let them take it at least in a fairer way so that only $12\frac{1}{2}$ crores will be taken from him. Why do they do it by debasing the currency and thus put crores of rupees into the pockets of other classes—the wealthier class too of the population and into the pockets of the foreign merchant and trader, at the expense of India's toiling masses?

So much for the main recommendation of the Currency Committee which is nothing more or less than a debasing of the currency. The Committee evidently felt that their recommendation had no justification in sound currency doctrine and accordingly they tried to make the most of the prevailing high prices. This price argument had been made the most of, but the fact is that the argument is based on two fallacies. In the first place, the high prices, the incidence of which is most severely felt by the masses, are the high prices of food-stuffs and not of imported goods. India itself produces all the food-stuffs it requires and does not normally import any. Therefore the change in the rate of exchange cannot be of any benefit as regards the prices in the one direction, *viz.*, food-stuffs in which it would be most important. It is true that the prices of food-stuffs had been high in 1918-19, but that was not because of the rate of exchange, but because of the failure of the monsoon re-

sulting in unusually short crops. The only right remedy in such an eventuality was the one actually applied by the Government, *viz.*, control over the export of food-stuffs and control over their internal distribution, thereby enabling the surplus of one province to make up for the deficiencies of the other. High prices of food-stuffs during 1918-19 have undoubtedly caused considerable suffering, but the change of the rate of exchange was no remedy. The high price enquiry has only been brought in to justify the debasing of the currency by an appeal to humanitarian sentiment. The *second* fallacy that has been worked for all it was worth was that while the *producer* might suffer by getting a smaller sum for his produce the *consumer* was gaining by paying less for imports, but the fallacy here is that the classes affected by this are entirely different. The bulk of the goods imported are not intended for the producing classes but for the wealthier classes and for trade and industry. Thus while the producer loses crores on the realization of his produce, the party that gains by it is the man who buys diamonds or silk or motor cars, or the mill owner, who gets his machinery and material cheap; and it is adding insult to injury to tell the producer that he should not complain of his losses because his richer neighbors were thereby benefiting. On close examination it will be seen that this defence of the change of India's standard unit is its strongest condemnation, because it tends to make the rich richer and the poor poorer.

As a further justification for the debasement of India's currency (the 50 per cent change in the value of its standard unit) the Currency Committee put forward the world's silver situation and try to make out that in the circumstances, it was absolutely necessary to raise our token rupee to a higher level in order to preserve convertibility of India's currency note. This argument of preserving convertibility has been made much of by the defenders of the Indian Government's currency policy. If, however, the rupee was

only a token coin as is admitted by the Chamberlain Commission, and if it was worth only 9*d.* each when it was circulated as the equivalent of 16*d.* during the years since 1894, the talk of preserving convertibility of the Indian Currency notes amounts to convertibility into mere tokens, and is not convertibility at all, and can only serve to delude the man in the street into the belief that the Currency Committee had been trying to maintain a sound currency principle, while, as a matter of fact, what they have done is contrary to sound currency doctrine.

However, let us go more closely into the position of silver and see if the silver situation at all justifies the most unusual step of debasement of the standard unit that is now recommended. The Committee, while saying that it was difficult to formulate any definite conclusions as to the level at which the price of silver is likely to stand, incline to the conclusion that the price of silver cannot be expected to fall below one dollar per fine ounce for many years, because, by the Pittman Act, the United States Government had bound themselves to replace the silver dollars sold for melting and export by fresh purchases at this rate. This argument may appear extremely strong on the surface, but we know that Acts of Congress can be unmade by the Congress, and we have the experience of the Bland and Sherman Acts to guide us. Those Acts were also intended to prop up silver and were also passed by the Democratic party to conciliate and retain the support of the Silver Democrats, and when it was found that purchasing by the United States Government did not suffice to keep up the price of silver these Acts were repealed. This history is likely to be repeated. The Pittman Act has been passed by the Democratic party and it is quite on the cards that as soon as the Republican party is in power (as it will be next March) it will remove this Pittman Act from the statute book and

thus relieve the United States from again burdening itself with huge quantities of silver.

Apart from the operation of the Pittman Act, the only thing that can keep silver prices at very high levels is demand. Now during the last five years, the price of silver has been influenced both by reduced supplies and increased demands. In the report on the world's production of silver that was drawn up by Professors Carpenter and Cullis for the Currency Committee they came to the conclusion that "if normal conditions should be restored in Mexico a production considerably in advance of the maximum attained in 1912 would eventually and probably shortly be realized." So that in the next few years supplies are again likely to be abundant. How about the demand? Will this continue as strong as it has been during the past five years? The demand was mainly: (1) From belligerent countries for large quantities of subsidiary coinage (2) from India; (3) from China. Of these the first has much fallen off and will soon be less than even in normal years as many leading countries have cut down the proportions of silver in their subsidiary coinage and even intend to use nickel for the purpose. As for the demand from India and China, many superficial thinkers consider that their heavy absorption of silver during 1917-19 must continue.

Past experience teaches otherwise. In past trade booms silver has gone up too, and when commodity prices came down it has again followed suit. A little consideration will show that this is inevitable. Take China. The balance of trade in her favor is say 100 and at normal prices is worth 100 units in gold, and is settled by x ozs. of silver. Prices rise and are three times normal as they are to-day. With even the same volume of trade the balance of trade in her favor will be worth 300 units of gold and would require:—

either $3x$ ozs. of silver
or x ozs, at thrice the normal price.

As the supply situation was such that it was impossible to furnish $3x$ ozs. (thrice the normal *quantity*) of silver, the inevitable adjustment was made by China having to pay thrice the normal *price* of silver.

The same thing has happened in India's case. Her balance of trade has also been influenced by high commodity prices and the situation has been made worse by her being unable to get gold in the settlement of her trade balance as she did in pre-war days. The burden of adjustment was therefore thrown entirely on silver.

One of the steps taken in pursuance of this new policy is the sale of Reverse Bills. I have already said that the Currency Committee had by one of their recommendations practically displaced the Gold Exchange System. In paragraph XII of their conclusions they say

"Council drafts are primarily sold not for the convenience of trade, but to provide for the Home Charges in the widest sense of the term. There is no obligation to sell drafts to meet trade demands."

If this means anything it means that if funds have to be laid down in India to pay for exports, it is not to be hereafter provided by Council Bills after the Home Charges requirements have been met. Any further funds banks must lay down in India in the ordinary way, *i.e.*, by shipping out gold. This really strikes at the very root of the Gold Exchange System which aims at preventing movements of gold. However, this change may be heartily welcomed as the most important step on the way to free India from the shackles of the artificial Gold Exchange System and put India on a natural basis in currency matters.

But if there are to be no Council Bills except for Home Charges requirements, why should there be any

Reverse Councils? As Council Bills help to lay down funds in India for the export trade, Reverse Councils help to lay down funds in London on account of the import trade of India. If the export trade is to finance itself in the ordinary way, *i.e.*, by importing gold, the import trade should also be left to finance itself in the ordinary way, *i.e.*, by exporting gold when necessary.

Again, if the Currency Committee really means what it says in the matter of Council Bills, then all its arguments from the price of silver are hollow and insincere. If Council Bills are not to be sold in excess of Home Charges requirements and gold has to go to India, then the notes issued will be against this gold, and this gold will be there in the Currency Treasury to cash the notes with whenever such notes are presented, and the need for minting large quantities of silver rupees will have disappeared.

In short the whole currency policy proposed is most indefensible from the point of view of Indian trade and industry and from the point of view of its toiling masses. . . . The Report is full of special pleading and tries to justify the various steps taken by the Finance Committee on Currency matters during the past three years and the justification is based on sentimental talk about high prices, about difficulties of getting silver, the profits to the revenues of India, etc.—in short on anything and everything but sound currency doctrine.

Unfortunately for them even silver has come down much earlier than they had thought it would. It is to-day 53*d.* sterling with a New York cross-rate of 3.40. This means that the real gold price of silver is to-day about 37*d.* only, or some 6*d.* under the melting point of the rupee on its old ratio of 15 to the sovereign. The fundamental recommendation of the Currency Committee is therefore not justified even on the score of high prices of silver and is, as shown, tantamount to debasing, and is a fraud on the debtor class for the benefit of the wealthier creditor classes.

DISCUSSION OF PAPERS ON CURRENCY AND EXCHANGE

MR. C. S. DEOLE, referring to the opening address of Dr. Slater in which he had said that high exchange was as good as low exchange, observed that he did not subscribe to that view. High exchange, he said, was not as good as a low rate of exchange. It would be good only in the case of monopolistic trade such as jute. In the case of competitive trade high exchange would be certainly as injurious as low exchange. He referred to the evidence given before the recent Currency Committee by Mr. Preston, the representative of the Indian Exchange Banks, where he said that a high rate of exchange was disadvantageous to competitive trades.

THE CHAIRMAN remarked that it was quite obvious that Mr. Preston was entirely in the wrong.

Prof. JOSHI said that with regard to the controversy about the currency and exchange policy, the first thing they had to bear in mind was that the function of the State was simply to supply the country with a scientific, *i.e.*, an automatic system, and leave the exchange to take care of itself. Secondly, it should be noted that it was absolutely unnecessary to maintain the 11/12ths fineness of the token rupee in order to keep up the value of the rupee whether at 1s. 4d. or at 2s., that being done merely by regulating the number of rupees in circulation. The only excuse for keeping the rupee 11/12ths fine was that the people of India had been accustomed for centuries to a full weight silver rupee. So if they were given a full-weight gold coin, the rupee need no longer be 11/12ths fine. This problem was not peculiar to India, but had to be faced by all countries when they determined to demonetise silver, *e.g.*, England in 1816 and Germany in 1873. The rupee as a unit for

transaction of business stood in a similar position to the mark in Germany, the franc in France and the dollar in America. There could be a ten-rupee or fifteen-rupee gold coin here as there was the 20-mark piece in Germany or the 25-franc coin in France. The gold exchange standard introduced in this country in 1899 was avowedly meant only to be a transitional measure for attaining to the gold standard in the near future, when the profits from the rupee coinage would lead to the accumulation of a fund sufficient for the latter purpose. This policy was eventually renounced by the Chamberlain Commission in 1913 when they maintained that the gold exchange standard was good enough for India and that the currency system though avowedly a managed one was not therefore a bad one. The Currency Committee of last year had no power to consider the question of the merits of the gold exchange standard itself.

The first thing they had to do was to attain an effective gold standard in spite of the Chamberlain report; and the fact that the people at large had no use for a gold coin was no argument. That only meant they could have most of their gold in reserve against the token rupees or notes in circulation. When the gold standard was actually established, their reserves in London would be in the same modest proportion as those kept by Japan, for instance, and there could be no inflation of rupees in India brought about by increasing the reserves in London. They would have secured an automatic currency system and would leave exchange to take care of itself, like England, Canada or Australia.

Prof. BRIJ GOPAL BHATNAGAR of the Kayastha Pathshala College, Allahabad, was in perfect agreement with the remarks made by Mr. Deole and Mr. Joshi, about the disadvantages of an unstable exchange. He wished to point out certain fallacies in Mr. Madon's paper. He did not agree with Mr. Madon as to his debasement theory of currency. He would have been justified in making that statement if gold were standard money in India in the sense in which it was understood by economists. Gold was not the standard coin and the rupee was the principal money for transacting business in the country. Any reduction in the number of rupees to be given in exchange for gold did not mean any debasement of internal currency, although it meant debasement of international currency. He also differed from Mr. Madon when

he stated this would cause loss to the producing classes of India. Here they had to remember that prices of commodities that India exported was expressed in terms of rupees and the prices of things imported from foreign countries in terms of currencies of those countries. If at any time the rate of internal to foreign currency was raised and if the price level in both the countries were to remain the same, the result would be that for every commodity imported they would have to pay less in their own currency and they would get more of the foreign currency in exchange of goods sent from India. If the rupee prices of exportable commodities in India would have fallen then there was reason to believe that the foreign importer wanted to pass off the rise onto the produce in India; but since prices had remained more or less at a higher level than before the foreign exchange rate was established, it showed the intensity of demand and that the Indian producer had not suffered. The real reason of the hue and cry from Bombay was that the exporter there had purchased commodities at certain rupee prices inside the country and had sold them in certain foreign gold values to certain foreign countries. Now when the value of that gold in terms of rupees fell, they suffered a loss. But that was merely a temporary loss and in future they could raise the gold rates.

Prof. GURMUKH N. SINGH said it was true that the ideal currency might not be the gold currency or the actual circulation of gold with the people; but the way to get the ideal currency was to make gold always available whenever people wanted to get it. In his opinion gold standard and gold currency were necessary as a step towards reaching the ideal—some sort of paper currency.

Prof. C. D. THOMPSON said that what the Currency Committee had advocated was not the debasing of the coinage as stated by Mr. Madon but the "exaltation" of the coinage. Perhaps "exaltation" was not the word, but it was the opposite of debasement. Debasement meant the issue of more money, but really less taxation, if the amount paid in taxes remained the same in rupees. The policy of raising the rupee to 2s. meant less rupees, but higher taxation, if the tax remained the same in rupees.

His own idea was that if the Government of India had allowed silver to flow out and gold to flow in when the price

of silver was relatively lower and that of gold relatively higher in India, they could have raised the rupee to a point where gold could have come into circulation.

He was in favor of what might be called an "alternate exchange standard", *i.e.*, if the price of gold was higher (one sovereign worth more than the silver content of Rs. 15), there should be free coinage of gold, limited coinage of silver, and Reverse Councils paid abroad in gold. If the price of silver were higher, there should be free coinage of silver, limited coinage of gold, and payments abroad in silver. The ultimate result of the above policy would be that we would have automatically a gold or silver standard, coining whichever metal were the cheaper at a profit, and paying abroad in the better metal, and thus there would be greater stability in our foreign exchanges.

Prof. STANLEY JEVONS¹ referring to Mr. Kibe's paper said that there was a real case for consideration of the grievances of native states in regard to currency matters, particularly in regard to subsidiary coinage. He thought it was a matter which had not been gone into thoroughly. Limited right of coinage of nickel and copper should certainly be maintained by those states who had already got that right. As regards the coinage of rupees by native states, under the present circumstances he thought it would be subject to a good deal of risk. The whole currency question was in such a state of flux, that it was difficult to state how the present changes would affect native states.

Coming to Mr. Madon's paper he entirely disagreed with his use of the term "debasing". That term was used by economists to mean the actual change of the metallic quality of the coin. If they were debasing a standard coin it would amount to defrauding the people. He thought that the nearest term to express what Mr. Madon wanted to convey would be "depreciation". As a matter of fact he thought that exactly the opposite, *i.e.*, appreciation of the rupee would be brought about by the change proposed by the Currency Committee. The general price level in India was connected with the price level of the rest of the world.

¹ Before this discussion a paper was read by Professor Jevons entitled "Exchange in 1920" in which he sought to explain the various economic factors which had influenced the Indian Exchange during that year. For reasons of space the paper cannot be printed in this volume. Substantially the same matter is included in Chapter XV of a book entitled *Money, Banking and Exchange in India* by Professor Jevons now in the press.

By putting up their rate of exchange they automatically brought down their price level in India, and although it took some time for the adjustment to come about, a lower price level would certainly come with the permanently higher level of exchange; and the creating of a lower price level meant the appreciation of the value of the rupee, not depreciation or debasement. As regards the question of the present high prices of foodstuffs, no doubt they were due partly to short harvests. But the high prices of foodstuffs were also due to the general depreciation of the value of money, which had been going on, mainly through the low exchange existing during the war time. Mr. Madon seemed to think that only those commodities which were imported or exported would be lowered in price by raising exchange; but that was not the case. The general level of all prices would be lowered in the same ratio, because the higher exchange could only be maintained by contracting the volume of the circulating medium.

The speaker disagreed with Professor Thompson with regard to alternative system of exchange. He was not quite convinced that it was even theoretically sound. The difficulties of management would be not twice, but five times as great as at present. He thought they should aim at the ordinary gold standard which was adopted in Europe, America and other countries of the world.

Prof. J. C. COYAJEE of Presidency College, Calcutta, said that the gold exchange standard was an intermediate condition between the gold standard and bi-metallism and hence the technical terms of the non-metallic currency—"standard" and "token"—could be used as regards their system only by analogy, and they should not press their application too far; otherwise they would be landed in fallacies. In India neither the creditor nor the debtor thought in terms of grains of gold. In answer to the contention that the debtor class had been hit by the rise of the exchange value of the rupee he said that the prices of products of the agricultural classes had been rising throughout, the tendency of a high exchange to reduce prices having been nullified by other factors. It had been said that high exchange could have no effect in lowering prices of food-grains, and that could only be effected by restrictions on exports of food-grains. In the first place restriction of export of food-grains would only

have a temporary effect in lowering prices as during the next year the agriculturist would sow only a smaller area of food-grains and a larger area of other commercial crops. In the second place if exports were allowed and exchange was raised, the exporter would obtain fewer rupees and so the Indian prices of them would fall. Further, the response of prices to exchange was, of course, quicker in the case of articles of export and import, and slower in the case of other articles; but ultimately even the latter were affected. Mr. Madon, unlike the Industrial Commission, seemed to underrate the great importance of imports as regards rural economy. Mr. Dalal, the strongest critic of the new policy, was in favor of leaving imports as they were, but wanted to reduce the exports. Circumstances had shown that the policy that had been adopted was wise, and if they had had export duties at present that would have greatly aggravated the present decline of exports. The critics of the Currency Committee's Report were not agreed as to the importance of convertibility of the note issue, which Mr. Madon had rather unduly belittled.

Prof. BURNETT-HURST said that they had to consider the whole question from the stand-point of the different classes. He wished to raise the question of the possibilities of establishing an Imperial note issue system, which he thought would probably relieve the difficulties of the exchange position. Coupled with that they might eventually try to develop an imperial banking system so far as trade relations between India and Great Britain and the Colonies were concerned. In that case they might be able to avoid the present difficulties. He suggested that their Association should appoint a committee to investigate the whole matter.

DR. SLATER welcomed the suggestion of Prof. Burnett-Hurst that a sub-committee should be appointed to consider the question. He also expressed his hearty agreement with the position taken by Mr. Deole and Mr. Joshi that India should have a gold currency. In his opinion the one money for the Empire should be upon a definite gold basis until the time arrived when it would be possible for the countries to adopt a scientific currency. He felt inclined to sympathise with the criticisms made against the Chamberlain Commission, for in all such commissions the great mistake made was that the bankers predominated over the economists. In his conversations with many bankers he was impressed with the narrowness of their

outlook and the insufficiency of their knowledge of economic theories and their uneconomic notions with regard to gold.

MR. DEOLE expressed his thanks for the general agreement of the members with regard to his paper.

MR. MADON replied briefly to the criticism made by members and said that his object in putting the paper before them was to stimulate thought. Prof. Jevons had been good enough to admit that debasing of the standard coin would be wrong, because it would be a fraud on one of the parties to a contract. However, Prof. Jevons seemed to think that in our case there was no debasing, because there was no depreciation of the rupee, but rather an appreciation, so that there was no debasing. Mr. Madon pointed out that both a depreciation and an appreciation of the standard coin was debasing, because in either case one of the parties to a contract was affected and was defrauded of his dues. In reference to the remarks of Mr. Coyajee and other speakers that all contracts in this country were in rupees and so nobody was affected in the way Mr. Madon feared, Mr. Madon's reply was that prices in India depended on what our foreign customers would pay us. These customers would pay us in so many grains of gold, and the conversion of same into rupees would be our affair. They were not going to give us more gold, because we had changed our ratio. The gold price paid to India would be controlled by the price levels in world-markets and would be the same whatever our ratio was. The consequence would be that such gold price would necessarily be exchanged for a fewer number of rupees under the new ratio than it would under the old. It was, therefore, a mistake to think our prices would remain unaffected. They were merely gold prices reduced to terms of rupees at such ratio as might have been fixed by Government.

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